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ABSTRACTS OF
DOCTORAL THESES ACCEPTED
FOR AWARD OF PH. D. DEGREES
DURING THE PERIOD FROM

January 1, 1986
to
December 31, 1986



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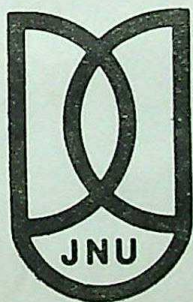
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ABSTRACTS OF DOCTORAL THESES ACCEPTED FOR AWARD OF Ph.D DEGREES DURING THE PERIOD FROM

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"A University stands for Humanism, for tolerance, for reason, for the adventure of ideas and for the search of truth. It stands for the onward march of the human race towards ever higher objectives. If the Universities discharge their duties adequately, then it is well with the Nation and the People."



Jawaharlal Nehru

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Second publication : April 1987—500 copies.

Published by Jawaharlal Nehru University, New Delhi (India) and

Printed at Paragon Enterprises, New Delhi-110002.

FOREWORD

We solicit suggestions for making this booklet more and more useful for reference of scholars. Any suggestions in this context will be particularly welcome and may be forwarded to the Coördinator (Ev.), J.N.U., New Delhi-110067.

With Compliments from :—
Coordinator (Evaluation)

Second publication : April 1987—500 copies.
Published by Jawaharlal Nehru University, New Delhi (India) and
Printed at Paragon Enterprises, New Delhi-110002.

FOREWORD

The first booklet of 'Abstracts of Doctoral Theses' accepted for the award of Ph.D. Degrees of this University during the Calendar Year 1985 was published in the month of April 1986, complementary copies of which were forwarded to University Libraries/Research Institutions/ various funding agencies for reference of research scholars pursuing research and also for co-ordination of research carried out in various Universities.

The publication was very well received by the academic community. I am, therefore, pleased to release another booklet of 'Abstracts of Doctoral Theses' accepted for the award of Ph.D. Degree of this University during the Calendar Year 1986.

April 30, 1987
New Delhi.

P.N. Srivastava
Vice-Chancellor
Jawaharlal Nehru University

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Longshore Transport of Sand on Madras and Puri Beaches

Tasawoor A Kanth

Sup : Prof. V. Asthana

Sediment movement is a universal phenomenon in all moving water bodies. In oceans it is largely restricted to coastal zones. Littoral drift—Sand transport along the Shoreline caused by the longshore currents with the help of wave surf—is the most important mode of coastal sediment transport. The rate and direction of littoral sand movement determines the destruction and the evolution of coast lines, river beds, estuaries and deltas and consequently exerts a considerable influence on the formation of the topography and stratification of the Earth's surface. It is also one of the most important determinants for the selection of sites for ports and navigation channels, because it effects the efficacy and the life span of hydraulic and the coastal structures. Besides, it constitutes the vehicle of transport for harmful contaminants released into the nearshore environment and thus influences the life cycle of various marine plants and animals.

The present work encompasses simultaneous field measurements of various wave and current parameters in the Surf Zone and the resulting longshore transport of sand on Madras and Puri beaches in different seasons, by making use of fluorescent sand tracers. Anthracene was used as the fluorescent tracer. The important findings based upon the data collected during the field studies are as follows :

Immersed weight longshore and transport (I_1) is directly proportional to the first power of the longshore component of wave energy flux per unit each length (P_1) by a relatively constant proportional coefficient (Equations 4 and 26). This constant proportional coefficient is at variance with that of Komar (1969), largely because of the finer grain size at our field sites.

(2)

Relationship between P_1 and I_1 is independent of grain size and beach slope, $\tan B$ (Equations 4 and 26).

Bed load is the major species of the moving sediment in the Surf Zone. This is in agreement with the latest work of Komar (1978) and contradicts the older reports.

Since the transport is principally as bed load, the longshore velocity of sand (V_l) decreases with decrease in grain size, till it reaches a minimum value that varies with season and beach (0.21 cm/sec to 0.24 cm/sec for Madras and 0.2 to 0.26 cm/sec for Puri). Beyond this value any decrease in grain size is accompanied by an increase in its velocity. There is, however, a limit to this increase of velocity with increase in grain size.

The maximum contribution to the sand volume transport rate is from the grain size fraction ϕ 2.25, in case of Puri and Madras beaches, inspite of its not having the highest advection velocity. This is because the above grain size fraction constitutes the modal class of the size distribution at these beaches.

Direct computation of diffusion rate (E_1) from the wave paramaters is not possible under all conditions (equation 27). For example, when waves break parallel to the shoreline, E_1 becomes zero and yet some diffusion occurs.

Further studies along these lines at two or three more points along the East coast will help evolve a complete picture of the trends in sediment movement and the annual sediment budget of the entire East coast.

References

- Aibulatov, N.A. (1957). "New Investigations on the movements of sand along Coasts". Bull. Oceanog. Comm. U.S.S.R, Vol 1, pp 72-80.
- Bagnold, R.N. (1963). "Mechanics of marine sedimentation." *The Sea*, Vol 3, ed. M.N. Hill, Interscience Publ., pp 507-528.
- Bowen, A.J. and D.L. Inman (1966). "Budget of littoral sands in the vicinity of Point Arguello" U.S. Army Coastal Engr. Res. Center, Tech. Memo No. 19, 41 pp.
- Bowen, A.J. (1969), "The generation of longshore currents on a plane beach," Jour. Marine Res., Vol 27, pp 206-215.
- Cadwell, J.M. (1956). "Wave action and sand movement near Anaheim Bay, Colifornia", U.S. Army Beach Erosion Board, Tech. Memo. No. 68, 21 pp.
- Chatterjee, A. and S. Goswami (1967). "Puri-Chilka Coastal area-A geomorphic study", Geog. Review of India, pp 20-33.
- Crikmore, M.J. and G.H. Lean (1962). "The measurement of sand transport by means of radioactive tracers", Proc. Royal Soc., Ser A, Vol 266, pp 402-421.
- Dean, R.G. (1973). "Heuristic Models of sand transport in the surf zone", Conf. on Engr. Dyn. In Surf zone, Sydney, Australia, 7 pp.
- Dey, A.K. (1956). "The shore lines of India", in Quaternaria, Vol.3, pp 95-100.
- Fairchild, J.C. (1973). "Longshore Transport of suspended sediment", Proc. 13th Conf. Coastal Engr. pp 1069-1088.
- Galvin, C.J. (1973). "A gross longshore transport rate formula", Proc. 13th Conf. Coastal Engr. pp 953-970.
- Grant, U.S. (1943). "Waves as a sand transporting agent", Am. Jour. Sci., Vol 241, pp 117-123.
- Evans, O.F. (1939). "Sorting and transportation of material in Swash and Backwash", Jour. Sed. Pet. Vol. 9, pp 28-31.
- Gole, C.V. (1963). "Fluorescent tracer study of Mangalore Port", Inter. Assoc. Hydraulic Res. Cong. 10th London, Vol. I, pp 275-281.
- Ingle, J.C. Jr. (1966). *The Movement of Beach Sand*. Developments in Sedimentology 5, Elsevier Publ. Co., New York.
- Inman, D.L. and W.H. Quinn (1952). "Currents in the Surf Zone", Proc. Second Conf. Coastal Engr., Council Wave Res., Univ. California, pp 24-36.
- Inman, D.L. and T.K. Chamberlain (1959). "Tracing beach sand movement with irradiated quartz", Jour. Geophys. Res., Vol. 64, pp 41-47.

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- Inman, D.L. and R.A. Bagnold (1963). "Littoral Processes", *The Sea*, Vol. 3, ed. M.N. Hill, Interscience Publ., pp 529-553.
- Inman, D.L. and J.D. Frautschy (1966). "Littoral processes and the development of shorelines", *Coastal Engineering*, Am. Soc. Civ. Engrs., pp 511-536.
- Inman, D.L., P.D. Komar and A.J. Bowen (1969). "Longshore transport of sand", *Proc. Eleventh Conf. Coastal Engr., Council Wave Res.*
- Johnson, J.W. (1953). "Sand transport by littoral currents", *Proc. Fifth Hydraul. Conf. Univ. Iowa Studies Engr. Bull.* 34, pp 89-109.
- Kanth, T.A. (1979). In M. Phil. dissertation submitted to Jawaharlal Nehru University, New Delhi (India).
- Kanth, T.A. and V. Asthana (1980). "Estimate of longshore sediment volume Transport rate along the Madras Beach", *Third Convention, Indian Association of Sedimentologists, Department of Geology, B.H.U. (India).*
- Kanth, T.A. and V. Asthana (1982). "Size—longshore transport velocity relationship along the Puri Beach", *Ind. Jour. of Marine Science*, Vol 11, pp 83-85.
- King, C.A.M. (1951). "Depth of disturbance of sand on sea beaches by waves", *Jour. Sed. Pet.*, Vol 21, pp 131-140.
- Komar, P.D. (1969). In Ph. D. dissertation submitted to University of California, San Diego.
- Komar, P.D. and D.L. Inman (1970). "Longshore sand transport on beaches", *Jour. Geophys. Res.*, 75 (30), pp 5914-5927.
- Komar, P.D. (1971). "The Mechanics of Sand transport on beaches", *Jour. Geophys. Res.*, 76 (3), pp 713-721.
- Komar, P.D. (1973). "The threshold of sediment movement under oscillatory water waves", *Jour. Sed. Pet.*, 43 (4), pp 1101-1110.
- Komar, P.D. (1976). *Beach Processes and Sedimentation*. Prentice Hall, England Cliffs, N.J.
- Komar, P.D. (1977). "Selective longshore transport rates of different grain size fractions within a beach", *Jour. Sed. Pet.*, 47 (4), pp 1444-1453.
- Komar, P.D. (1978). "Relative quantities of suspension versus bed—load transport on beaches", *Jour. Sed. Pet.*, 48 (3), pp 921-932.
- Krumbein, W.C. (1944). "Shore currents and sand movement on a model beach", *U.S. Army Beach Erosion Board, Tech. Memo No. 7*, 43 pp.
- Longuet-Higgins, M.S. and R.W. Stewart (1963). "A note on wave set-up", *Jour. Marine Res.*, Vol 21, pp 4-10.
- May, J.P. (1980). "K-type coefficient in the littoral drift system" *Discussion Marine Geol.* Vol 41, pp 337-338.

- Medvedev, V.C. and N.A. Aibulatov (1956). "The use of marked sand for the study of the transport of marine detritus", *Izv. Akad. Nauk S.S.S.R. Ser. Geograph.*, Vol 4, pp 99-102.
- Owens, E.H. (1977). "Temporal variations in beach and nearshore dynamics". *Jour. Sed. Pet.*, 47 (1) pp 168-190.
- Ray, I., T.N. Malik and K.V. Venkatesh (1975). "Fluorescent tracer tests in Calicut and Baypore, Kerala-A Preliminary appraisal", *Ind. Mineral*, Vol 29, pp 41-46.
- Ray, I. and K.V. Venkatesh (1975 b). "Fluorescent tracer studies in Tuticorn area, Gulf of Manner", *Ind. Jour. Marine Science*, Vol 4, pp 93-95.
- Reid, W.J. and I.P. Jolliffe (1961). "Coastal experiments with fluorescent tracer", *Dock and Harbour authority*, Vol 41, pp 341-345.
- Russel, R.C.H. (1960). "Use of fluorescent tracers for the measurement of littoral drift", *Proc. Seventh Conf. Coastal Engr., Council Wave Res.*, pp 418-444.
- Savage, R.P. (1959). "Laboratory study of the effect of grains on the rate of littoral transport", *U.U. Army Beach Erosion Board, Tech. Memo. No. 14*, 55 pp.
- Saville, T. Jr. (1950). "Model study of sand transport along an infinitely long straight beach". *Amer. Geophys. Union, Transactions*, Vol 31 pp 555-565.
- Shepard, P.P. (1967). *Submarine Geology*. Harper and Row, New York.
- Shrivastava, P.C. (1970). "A mechanical device for releasing fluorescent tracer", *Marine Geol.* Vol 9, pp M43-M46.
- Shrivastava, P.C. (1974). "Fluorescent tracer studies in India, a review", *Ind Minerals* Vol 28, pp 106-110
- Shrivastava, P.C. (1976). "Study of movement of sediment by fluorescent tracer at Paradip Port, East Coast of India", *Ind Mineral* Vol 5, pp 121-124.
- Siddiquie, H.N. and P.C. Shrivastava (1970). "Study of sediment movement by fluorescent tracer at Haldia Anchorage", *Curr. Sci.* Vol 39, pp 451-454.
- Steers, J.A. (1969). *Coasts and Beaches*. Oliver and Boyd, Edinburgh.
- Watts, G.M. (1953). "Study of sand movement at South Lake Worth Inlet, Florida", *U.S. Army Beach Erosion Board, Tech. Memo No. 42*, 24 pp.
- Wiegel, R.L. (1954). "Gravity waves tables of function", *Council Wave Res. The Engineering Foundation*.
- Yasso, W.E (1965). Fluorescent tracer particle determination of size-velocity relationship, Sandy Hook, New Jersey", *Jour. Sed. Pet.*, Vol 35, pp 989-993.
- Zenkovich, V.P. (1967). *Processes of Coastal Development*. Oliver and Boyd, Edinburgh.

The Possible Modifying Influence of some Environmental Factors on the 7.12—Dimethylbenz(a) Anthracene-Induced skin Tumorigenesis in Swiss Albino mice.

J.M. Patnaik

Sup : *Prof B. Bhatia &*
Prof A. Ramesha Rao

Carcinogenic action per se does not always operate at optimal efficiency. A large number of variables have a major influence on the carcinogenic response (Berenblum 1974, 1978; Sivak, 1979; Kouri, 1980; Miller and Miller, 1981; Farber, 1984). The variables may augment/ accentuate the process or they may inhibit/retard the process. Hence, the need to identify such variables (modulators) which ultimately determine the susceptibility of an individual to carcinogens is of paramount importance.

Experiments were designed to evaluate the modifying potential of some environmental factors/variables on DMBA—induced skin tumorigenesis in mice (Swiss albino mice), during the initiation component of the two-stage tumorigenesis.

The environmental factors (exogenous) investigated included (a) Two dietary factors—namely garlic and mustard (b) One drug factor—mercaptopyropionyl glycine (MPG) (c) Physical factor like, Hypothermic stress ($10^{\circ}\pm 2^{\circ}\text{C}$) and Hyperthermic stress ($36^{\circ}\pm 2^{\circ}\text{C}$).

Inbred Swiss albino mice were used as the test animals. Young mice in their resting stage of hair-cycle were selected for experimentation.

Skin was chosen as the target site and the two-stage protocol was employed for the induction of tumors.

The two-stage protocol involved a single topical application of DMBA, followed by twice weekly application of croton oil till the

(7)

termination of experiments. By following such protocol, two clear-cut stages namely, initiation phase and promotion phase were made available without any overlapping. The target-site was subjected to the influence of modifiers (modulators) during the initiation phase.

Experiments were terminated 15–18 weeks after the application of croton oil and the tumor response in various groups was quantitatively measured by (a) Percent of mice that developed identifiable tumor (Percent incidence), (b) Tumor Yield the cumulative number of tumors per group and the mean number of tumor per mouse, (c) the average latent period—the time lag between application of promoting agent and the appearance of overt tumor (d) the distribution patterns of tumors. Appropriate statistical techniques (Chi Square, Student's *t*-test, ANOVA TEST and Poisson Distribution) were employed to interpret the results.

At the termination of the experiments, tumors at random, were processed by standard histological techniques for histological confirmation—the most striking neoplastic properties of the tumor (Plate—1) included a trend towards a condition of disorder, dedifferentiation and disorganization through an invasion by intensely active cells.

There appeared to be an irreducible minimum of about 4–5 weeks of latent period in conformity with the finding of Van Duuren *et al* (1973).

Modulating potential of the environmental variables :

Mustard :

Mustard oil was topically applied to the target site prior to as well as subsequent to initiation with DMBA. It did not inhibit the tumorigenic process: nor it augmented the tumor response in the present model system. Therefore, it is reasonable to conclude that mustard oil is a "non-risk" factor (not co-carcinogenic). It does not have the anticarcinogenic property possessed by some other members of the Cruciferae family—such as Cabbage and Cauliflower.

MPG :

MPG was topically applied to the target site, once prior to initiation and once subsequent to initiation. There was neither augmentation nor inhibition in the tumor response.

(8)

Thermal stress :

Animals were subjected to cold stress ($10^{\circ}\pm 2^{\circ}\text{C}$) prior to as well as subsequent to initiation. The tumor response in terms of percent incidence and tumor yield did not show any difference. The latent period was only extended. Subjecting the animals to hyperthermic stress ($36^{\circ}\pm 2^{\circ}\text{C}$) in similar manner the tumor response was compared with that of the control group. There was no significant difference in tumor response. Acute exposure to thermal stress during the initiation stage was ineffective in altering the course of tumorigenesis.

Garlic :

The regimen of garlic treatment was different for different groups. There were four groups with the following treatment schedule—

- (i) Three topical applications prior to initiation;
- (ii) Three topical applications subsequent to initiation;
- (iii) Three topical applications prior to initiation as well as three topical applications subsequent to initiation ;
- (iv) Concomitant application with DMBA.

The three topical applications prior to initiation produced 45.5% inhibition in the percent-incidence and 28.02% reduction in the tumor yield. The three applications subsequent to initiation produced only 22% inhibition in percent incidence which was statistically insignificant. There was no reduction in the tumor yield. The prior and post treatment of garlic resulted in 61.1% inhibition in percent incidence, which was quite significant ($p. 0.1$). The inhibition in the tumor yield was 57.3%. The concomitant application of garlic with DMBA had no inhibitory effect. The combination of pre and post-treatment brought about more pronounced inhibition. This indicates that inhibitory influence of garlic was dependent on the time of its application relative to initiation.

As the prior application of garlic exercised inhibitory influence, garlic can be grouped under the category of "Blocking Agents". A more pronounced inhibition caused due to combined regimen of pre and post application of garlic suggests that garlic has the ability to exert its inhibitory influence at "more than one time point".

The peculiarity of garlic is that it does not share the "enzyme inducing" property of most inhibitors reported so far. It is an "enzyme inhibitor". This leads one to think that probably the mechanism of inhibition in case of garlic is something different.

Geochemistry of the Ganges River Basin

Nazar Abbas

Sup: Dr. V. Subramanian

Introduction :

It has been suggested by Garrels and Mackenzie, (1971) Turekian, (1972) Veizer, (1979) and others that the cycling of the earth material has been taking place involving continuous addition to and withdrawal from the ocean and the atmosphere for millions of years at a roughly constant pace. To estimate these removals from continents and addition to the ocean, the study of weathering, erosion, transportation and ultimate fate of the sediments becomes very important. Of all transporting agencies like river, glacier, wind etc. rivers are the most dominant contributor to the mass transfer across the continent ocean interface. Rivers contribute 89% of the total mass transfer to the ocean. They receive the product of weathering and erosion and deliver it to the oceans. Thus they help in understanding weathering and erosion processes which operate in the basin area.

Rivers with 1.2 thousand cubic kilometer of water account for only 0.0001 percent of water in hydrosphere. Rivers annually discharge approximately 18000 cubic kilometer water into the ocean. They are estimated to carry 20 billion tons (Holeman; 1968) to 15.5 billion tons (Milliman and Meade 1983) of sediment load and 3.5 billion tons of dissolved load (Meybeck, 1976) into the world oceans. The bulk (about 70—73%) of these loads is derived from southern Asia and larger islands in the Pacific and Indian Oceans. The Huang Ho, Yangtze and Himalayan river contribute significantly more suspended sediments in far higher concentration than do other rivers.

The study of geochemical aspects of these rivers is essential to understand the processes operating in these river basins and quantify the products of these processes which are being delivered to the ocean.

Keeping these objectives in the mind, based on three years sampling, the geochemistry of the Ganges River Basin which is the most important river system of India, has been attempted with obvious limitations.

Methodology :

Extensive sampling was done throughout the basin during year 1981-1983. Water and sediment samples were collected from the main river and tributaries simultaneously.

After filtration and removal of suspended sediments, the water samples were analysed for major cations and anions by atomic absorption spectrophotometer pH-ion analyser and titration method. pH and conductivity were also measured. Grain size analysis of bed sediments was done by sieving and suspended sediments analysis was done by settling and pipetting technique. Mineralogy of suspended sediments was studied by X-ray diffraction (XRD). The chemical analysis of bed and suspended sediment was done by bomb digestion and solution A method for major elements. Additional data on minor and trace elements were generated using thin film X-ray fluorescence technique (XRF). The important findings of the present study are given below.

Water chemistry and dissolved load :

The Ganges river water is alkaline as most river waters of the world. The pH ranges between 7.7 to 8. The alkalinity increases downstream with the addition of more alkaline tributary waters. The specific conductivity ranges between 155 to 295 micro Siemens per square centimeter.

The total dissolved salts (TDS) ranges from 105 to 290 ppm. Bicarbonate and calcium are two major constituents of river water constituting 57% and 23% of TDS respectively. Next most abundant dissolved species are sulphate, sodium, magnesium, chloride etc. The spatial variation in TDS has been noticed with a general increase downstream. The water chemistry of the Ganges River Basin is largely controlled by weathering of rocks in the province and especially carbonates. Precipitation and silicate weathering play a minor role but are important in controlling sub basin water chemistry.

The Ganges annually carries 83 million tons of dissolved load into the Bay of Bengal which is nearly 2.3% of the world and 29% of the

Indian dissolved load to the ocean. Among the tributaries, Yamuna carries maximum dissolved load followed by Ghaghra, Gandak, Son, Ramganga and Gomti. The amount of annual individual ionic fluxes are as follows-bicarbonate 45, chloride 4.4, sulphate 3, phosphate and fluoride together 1, silica 1.7, calcium 18.2, magnesium 3, sodium 4.4, and potassium 2 million tons.

Sediment transport :

The total suspended matter (TSM) is highly variable and varies between 110 to 3317 ppm in the Ganges mainstream. The TSM concentration is controlled by the contribution and dilution by various tributaries which is controlled by the geology of the catchment. Apart from natural factors, TSM is also influenced by human activities.

The Ganges River including distributary Padma discharges nearly 493400 million cubic meter of water at Calcutta. Along with this it carries 329 mt of suspended sediment load into the adjacent estuaries and ocean. Taking the sediment transport as a measure the Ganges will be placed third largest sediment transporting river of the world after Yellow and Amazon. Among the Indian rivers it is the largest sediment transporting river.

Sediment size distribution

The bed sediments largely consist of fine and very fine sand with a little amount of medium sand and silt. The suspended sediments, on contrary consist of silt clay and very fine sand. The average mean grain size of bed sediment is 149 micron while that of suspended sediments is 62 micron. The bed and suspended sediment characteristics change with the change in depositional environment and hydraulic sortings.

Mineralogy :

The suspended sediments of the Ganges River Basin consist mainly of quartz, feldspar, calcite, dolomite, amphibole and clay minerals. Illite is the most abundant clay mineral in the suspended sediment and constitute upto 90% of clays. Kaolinite is present upto 10%. Chlorite with larger proportion of montmorillonite is recorded at Allahabad. The presence of feldspar and insignificant amount of kaolinite suggests partial decomposition of feldspars.

Sediment chemistry

Out of the six major elements in the bed sediments, Si, Al, Ca and Fe together constitute upto 95% of the total 20 analysed (lithogenous) elements. Si is the most dominant element throughout the basin followed by Al, Fe, Ca, Mg and K. The overall composition of tributaries are similar to that of the main river with marked variation in some elements which are derived from varied geological and climatological regions.

The suspended sediment show marked higher concentration of Al and lower concentration for Si when compared to the bed sediments. As compared to the bed sediments the calcium is deficient in suspended sediment. The transition elements in the suspended sediments have shown higher concentration than the bed sediments.

The sediment discharge weighted composition of the Ganges River shows a marked difference in Al, Si, Ca with that of Indian average river sediments. The Ganges sediments are having higher concentration of Al but are poorer in Si, Ca, and transition elements. The discharge weighted average composition of the Ganges is in good comparison with the Bay of Bengal sediments composition. The elemental concentrations are highly variable in various parts of the basin. At calcutta, the Ganges discharges 89, 43, 10, 8, 7 and 6 million tons of Si, Al, Fe, Ca, K and Mg respectively in particulate matter to the Bay of Bengal.

Erosion rate :

The average erosion rate of the Ganges Basin is 549 t/km²/yr. This places it as one of the most important rivers of the world in term of sediment delivery to the ocean. With the present erosion rate the basin would be reduced to present day sea level in 4.2 million years provided there is no compensating mechanism and the erosion rate is constant. However fluctuations noticed in erosion rates rule out constancy of natural erosion process perhaps due to human influence.

Further investigations are needed to study the elemental mass balance, temporal variation and reason for such high alarming rate of erosion in detail. The study will be useful in understanding the human influence in natural geochemical processes in detail.

Geochemistry and Genesis of Gold Mineralizaion in the Precambrian kolar Schist Belt, South India

Neelam Siva Siddaiah

Sup : Dr V. Rajamani

Most of the world's primary gold production comes from the Precambrian rocks and many of the major gold deposits are associated with various rock components of Archean greenstone belts. Although this association is clear, the reasons for this association are not, unlike Ni-sulfide deposits which are reasonably well understood. An understanding of this aspect is fundamental both to exploration of these ores and to our knowledge of Archean supracrustal geology.

Gold mineralization in the Archean Kolar Schist Belt of the Dharwar Craton is very well known. However, the origin of this important deposit in terms of source, transport and depositional mechanisms of gold is not known. As a part of our major research on the relationship between petrogenesis and ore genesis in Archean greenstone belts, we have chosen the Kolar Schist Belt for our study. One of the objectives of our research on the Kolar gold deposits is to characterise the mineralogy and geochemistry of individual ore lodes and to evaluate the geological and geochemical processes responsible for this important gold deposits in India. The result of this may potentially be very useful to evaluate other greenstone belts in India for their gold mineralization.

The Kolar Schist Belt is one of the eastern-most Archean, volcanic-dominated belts of the Dharwar Craton of South India. Although sporadic occurrences of gold is reported in all the greenstone belts of the Dharwar Craton, economic concentrations of gold is particularly confined to the eastern belts such as the Kolar, Ramagiri and Hutti, of which Kolar is by far the most significant. The Kolar belt is a N-S striking, linear (80×4 km), multiply folded synform with a northerly plunge and is sliced by three sets of major fault systems. The belt is

dominated by several units of mafic volcanics of which some could have been derived by partial melting of an incompatible element enriched mantle sources (Rajamani et al. 1985). Banded iron formation occurs as continuous ridges along the western margin of the belt and also occurs as discontinuous patches on the eastern margin and within the belt. A felsic volcanic unit called the 'Champion Gneiss', which is believed to be derived from low per cent melting of komatiitic rocks occurs along the eastern margin of the belt. The belt is surrounded by granitic gneisses and all the rock units in and around the belt have undergone a middle amphibolite facies of metamorphism. Gold occurs here as gold-sulfide lodes and as gold-quartz-carbonate veins associated virtually with all the rock components of the belt. The belt can be divided into three parts along the strike namely, northern, central and southern parts. Dominant mineralization and extensive mining is confined to the central part. New lodes with economic concentrations of gold have been discovered in the southern part, whereas in the northern part mineralization appears to be rather poor and uneconomic.

In the central part of the belt (the Kolar Gold Fields) there are several gold lodes occurring both as gold-quartz-sulfide lodes associated with banded iron formation which are interlayered with amphibolites and as gold-quartz-carbonate lodes associated with amphibolites. There are several sulfide lodes which are commonly confined to the stratigraphic contacts. They grade into unmineralised sulfide iron formation towards west, which are associated with several bands of graphitic-sulfidic schists. In the southern part of the belt gold occurs as sulfide lodes associated with the banded iron formation within amphibolites and as gold-quartz-lodes associated with felsic volcanics. In northern part gold occurs as auriferous carbonaceous sulfidic chert associated with amphibolites.

In the central part of the belt (KGF area) several stratiform gold sulfide lodes occur on the western side of the belt. These lodes have a maximum of 10 m in width and extended for a few kilometers along the strike. These lodes are parallel to each other and in turn parallel to the schistosity of the host rocks. These lodes consist bands/layers of sulfide, oxide and cherty-quartz and the width of these bands decreases towards the western margin of the belt. The proportion of magnetite decreases and that of sulfides increases towards the western margin. Pyrrhotite and arsenopyrite are the dominant sulfide minerals in all the lodes. Loellingite, sphalerite and chalcopyrite occurs as minor phases. The westernmost lode has relatively higher amounts of sphalerite and chalcopyrite and lower amounts of arsenopyrite. Arsenopyrite occurs

as euhedral crystals and are highly deformed. Gold commonly occurs as patchy inclusions mostly in deformed arsenopyrite crystals. Gold also occurs as large subrounded inclusions in silicates. In addition to these minerals, many samples contain discrete ilmenite grains. The sulfide lodes in general have lower gold than quartz-carbonate lodes. Among the sulfide lodes in the central Kolar Schist Belt, there seems to be some positive correlation among arsenopyrite, magnetite and gold. For example, the westernmost lode has lower arsenopyrite and magnetite and much lower gold. This lode has higher abundances of Ni, Cr and base-metals. This lode also has higher TiO_2 , Al_2O_3 , and K_2O compared to eastern sulfide lodes.

In the central Kolar Schist Belt, the dominant gold mineralization is associated with quartz-carbonate lodes on the eastern side of the belt. These lodes are essentially fissure-veins and have sharp contact with the host rock. The lode system is generally parallel to the strike of the belt extending for several kms. Individual veins are usually less than 1 m in width and cut the schistosity in many places. These lodes appear to be in enechelon branching sets, terminate abruptly and pick up after some interval. The lodes consist of predominantly of quartz with significant quantities of carbonate and minor amounts of tourmaline, biotite. They also have trace amounts of sulfides mostly galena, pyrite, sphalerite, pyrrhotite and chalcopyrite along with gold and scheelite. These lodes have anomalously higher concentrations of Cr and Ni.

In the southern part of the belt gold mineralization is present in association with sulfide facies of banded iron formation, amphibolites and with felsic volcanics. Here sulfide lodes seem to be more prominent, although gold-quartz lodes are also known to occur within the Champion Gneiss. The gold-sulfide lodes have higher proportions of sulfides, and are well crystallised. The lode associated with banded iron formation at Mallappakonda is well banded. It includes monomineralite layers of large crystals of arsenopyrite and has the highest arsenopyrite content among the sulfide lodes in the belt. However, this lode does not have the highest concentration of gold. Here gold occurs as inclusions in deformed arsenopyrites and also in silicates. The sulfide lodes associated with amphibolites are massive and net-textured sulfidic-chert. The dominant sulfide mineral is pyrrhotite with minor amounts of pyrite, chalcopyrite, galena and sphalerite. Gold occurs as inclusions in chalcopyrite and also in silicates. Arsenopyrite occurs in trace amounts. However, these lodes have higher concentrations of gold relative to the arsenopyrite-rich lodes of the belt. They also have relatively higher concentrations of base metals.

The temperatures of final equilibration of the mineral assemblages in various lodes were estimated from the arsenic content of arsenopyrite (Kretschmar and Scott, 1976). The estimated temperatures are 540°C and 480°C for southern arsenopyrite dominated lodes and the central sulfide lodes respectively. These estimated temperatures are in agreement with the middle amphibolite facies of metamorphism of the host rocks inferred from the mineral chemistry of calcic-amphiboles (Rajamani et al. 1981).

The disposition of gold-sulfide lodes parallel to each other and to the general schistosity of the multiply-folded amphibolites, their intimate association with banded iron formation which in turn are associated with amphibolites, the interbanding of sulfides and oxides in the ore lodes and their textural features all seem to suggest a syngentic origin for the sulfide lodes. The deposition of banded iron formation and auriferous sulfides seem to be contemporaneous, the latter probably deposited from convective hydrothermal solutions reaching the sea-floor. The topography of the sea floor and the depth of the seawater seem to have controlled the amount of the sulfide and their associated gold. Deep water facies seem to have lower gold, arsenic and higher concentration of sulfides and base metals as suggested by Fripp (1976).

There seems to be no correlation between arsenopyrite contents, gold and base metal concentrations among the various sulfide lodes of the entire Kolar belt, perhaps suggesting that all the lodes are not related to a single geothermal system. However, the uniformity in the mineralogical and chemical composition of all the sulfide lodes suggests that the ore solutions responsible for the deposition of these lodes could be broadly similar in their chemical composition. The minor variations in their mineralogy and chemistry are probably due to local variation in the physico-chemical nature of ore solutions and/or in the environment of deposition. The general paucity of base metals, and the preponderance of silica and Fe, lower concentration of gold, in all the sulfide lodes of the belt probably implies the involvement of relatively low-temperature, high-pH hydrothermal solution related to a low water/rock ratio geothermal systems, in the transportation and deposition of gold.

The gold-quartz-carbonate lodes in the central part of the belt differ in their field disposition, geometry, structural features and in their mineralogical make up from that of gold-sulfide lodes. In contrast to the gold sulfide lodes, the gold-quartz-carbonate lodes have unusually higher concentrations of Ni and Cr. The association of high Ni and Cr

values with that of high gold values and low abundances of galena-dominated sulfides suggest that the chemical nature of the fluids involved in their transport were probably different and were enriched only in H_2O and CO_2 , containing some carbonyl complexes which are potential carriers of Au, Cr, W, Si with little sulfur (Hutchinson and Burlington, 1984). This hydrothermal system may have been related to post-metamorphic processes and perhaps genetically related to the intrusion of sub-volcanic equivalent of the Champion Gneiss. Precipitation of gold occurred when the gold-rich, uniform, fluid-reservoir reached gold saturation perhaps by reaction with country rock amphibolites.

Thus, there are atleast two contrasting types of gold mineralization in the Kolar belt. Sulfide lodes could be relatively older than the quartz-carbonate veins. It is possible that these two types of gold deposits may not have any spatial relations at the time of their formation.

Some Aspects of the Ecology of a Nitrogen-Fixing Grass-Bacterial Association

Kailash Mandhan

Sup: Prof. C.K. Varshney

Nitrogen is an essential major element required for normal growth and development of all living organisms. All plants and animals are exposed to an atmosphere containing over seventy percent nitrogen. However, only fixed form of nitrogen can be used by most of the living beings. The availability of fixed nitrogen, therefore, is a crucial factor in determining ecosystem productivity.

Fixation of gaseous nitrogen in nature is brought about through biotic as well as abiotic processes. Abiotic processes such as electric discharge and lightening contribute to a limited extent in the global nitrogen cycle. However, biological nitrogen fixation (bnf) through symbiotic and asymbiotic diazotrophs is a major source of nitrogen fixation in the biosphere. Nitrogen availability can also be augmented through industrial fixation but is an energy intensive process requiring 104 K joules per mole of nitrogen fixed. Dwindling energy resources and increasing demand for dietary nitrogen have greatly complicated the problem leading to an unprecedented escalation in the cost of nitrogenous fertilizers. The need to reduce our dependence on fossil fuels, to overcome the crippling effect of energy crisis syndrome has necessitated a closer look at bnf. However, bnf is a restricted phenomenon and the ability to fix nitrogen is limited to a very small group of microorganisms called diazotrophs.

A recent discovery of nitrogen-fixation by tropical grasses such as *Digitaria decumbens* and *Paspalum notatum* (Dobereiner, 1970, 1972 and Dobereiner, Day and von Bulow, 1975) has greatly stimulated studies on bnf by non-leguminous herbaceous flowering plants. The occurrence of diazotrophic bacteria in the rhizosphere of tropical grasses was for

the first time reported by Day *et al.* (1972). A new term, namely 'associative symbiosis' has been coined for this recently discovered nitrogen fixing association between the non-nodulating non-leguminous flowering plants and the diazotrophic bacteria. This simple association has remarkably high potential of nitrogen fixation and a wide range of geographic distribution. It has attracted the attention of a large number of workers from various parts of the world.

Soil nitrogen is generally not sufficient for plant growth and development (Haystead and Sprent, 1979). The nitrogen fixing ability of the diazotrophic association in non-legumes is an important activity and its potential should be carefully evaluated in terms of its N contribution. With this in view, an assessment of the contribution of N-fixing potential of *Azospirillum* to the N-economy of *Dactyloctenium aegyptium* (L.) Beauv. a local grass, was studied.

The following considerations have prevailed in the selection of the plant material, inoculum, growth conditions and experimental design.

(a) A nitrogen fixing microsymbiont (D_4) obtained from the rhizosphere of naturally occurring *D. aegyptium* plants was used in this study. This diazotrophic bacterium is similar to *Azospirillum* and was most promising among the isolates obtained from the roots of local nitrogen fixing grasses and sedges. Hence, the *D. aegyptium* plants were selected for studying the potential of nitrogen fixation by D_4 with its natural host. Use of D_4 isolate in the culture experiments with *D. aegyptium* plants overcomes any likely problem of incompatibility between the host and the microsymbiont. The consideration that there should be no incompatibility between host and the microsymbiont imposed a restriction on the choice of material to be used as macrosymbiont.

(b) Use of aseptically grown plants from surface sterilized seed of *D. aegyptium* helped in maintaining a specified rhizospheric microflora, thereby, reducing any complications caused by any likely interaction between the inoculated microsymbiont and the unidentified native bacteria in the substratum.

(c) Balandreau *et al.* (1978) have reported that, field inoculation trials are not likely to show stimulatory effect on plant performance unless care is taken to optimize the growing conditions. With this in view, the plants were grown under controlled conditions in growth rooms $30 \pm 1^\circ\text{C}$ temperature and uniform light intensity to achieve optimal growth.

(d) Venkateswarulu and Rao (1983) have emphasised the importance of the use of nif mutants in evaluating the actual contribution of the diazotrophs to N-accumulation by the host plant. Elmerich and Franche (1981) reported the synthesis of nif mutants of *Azospirillum* (As 7571). It was considered interesting to use nif⁻ mutants and observe the effects of inoculation of Az 7571 on grass *D. aegyptium* as it might throw some light on the contribution of the diazotrophs to the non-legume plants.

Aseptically grown seedlings of *D. aegyptium* were inoculated to study :

1. Acetylene reduction activity of the inoculated plants,
2. The effect of D₄ inoculum on the performance of *D. aegyptium* grown for 100 d,
3. Localization of associative microsymbiont in the host roots, and
4. Interaction between the host and the microsymbiont using different inocula under two levels of substrate nitrogen (basal : Nb and supplemented : NS).

In the present investigation the microsymbionts from various local grasses and sedges exhibiting ARA were isolated : *Bothriochloa pertusa*, *Dactyloctenium aegyptium*, *Heteropogon contortus*, *Sporobolus marginatus* and *Typha angustata*. The ARA of microsymbionts isolated from these species was found to vary between 38.2 to 70.0 nmol h⁻¹ ml⁻¹.

The most efficient acetylene reducing isolate was D₄ (70.0 nmol h⁻¹ ml⁻¹), obtained from the roots of *D. aegyptium*. The D₄ was inoculated on to bacteria-free 7 d old seedlings of *D. aegyptium* raised from the surface sterilized seeds. Bacteria free plants of *D. aegyptium* were also inoculated with nif⁻ mutants of *Azospirillum*, (made available by C. Elmerich, France and derived from Az 7000, originally called as Sp 7), for evaluating and comparing their performance with D₄ inoculated counterparts. Plants of *D. aegyptium* were also inoculated with autoclaved bacteria and were maintained under similar conditions for comparison.

The success of establishment of the inoculum was ascertained in 100 old *D. aegyptium* plants. An examination of thin transverse sections of the roots of these plants revealed an abundance of bacteria in the outer cortex, epiblema and on root surfaces. A few cells were present

in the intercellular and intracellular spaces of the inner cortex. Some of the vascular elements also contained scant bacterial cells.

The bacteria were reisolated from the roots of *D. aegyptium* plants inoculated with D_4 isolate, and their characters were matched with the original isolate. The virulence of the isolate was ascertained by inoculating three successive sets of *D. aegyptium* plants. The Koch's postulates of bacterial incidence were found to hold good in case of *D. aegyptium* — D_4 plant — bacterial association.

Inoculation of *D. aegyptium* with D_4 was found to have positive effect on plant performance. There was a 48.1, 37.5 and 11.4 percent increase in biomass over the uninoculated controls and a difference of 62.6, 25.7 and 1.1.7 percent over the nif^- inoculated plants. Similarly, plant height was also increased by D_4 inoculation. There was an improvement of 91.9 and 113.8 percent over the uninoculated controls and 130.9 and 65.8 percent over the nif^- inoculated plants.

The percent difference in the values of average N plant⁻¹ between the D_4 inoculated and nif^- inoculated plants was 189.0, 100.9 and 76.0. It was 146.6, 103.9 and 72.1 percent over the uninoculated plants in the three sets of experiments (Table 4.23). There was also a noticeable difference in mg N g⁻¹ values in response to D_4 inoculum: 69.0, 49.1 and 49.2 percent over the uninoculated plants and 35.7, 25.0 and 53.8 percent over the nif^- inoculated plants.

The difference in performance of the inoculated and uninoculated plants increased progressively with growth upto a period of 100 days, as evident from the regression of mg N g⁻¹ values on plant age in days.

This investigation has shown that the D_4 isolate establishes successful nitrogen fixing rhizospheric association with *D. aegyptium*. There was a significant interaction between three classes of inoculum and two levels of nitrogen as evident from Duncan's multiple range test applied on analysis of variance. D_4 was able to make a positive contribution to the N-economy of the host. The positive effect of D_4 inoculation on the performance of *D. aegyptium* and N-status of the substratum was mainly due to the nitrogen fixing association between the D_4 and roots of *D. aegyptium*.

Dielectric Dispersion and Effects of Microwave in Biological Media

Somes Ray

Sup : Dr. J. Bihari

Recently there has been a growing concern on the effects of electromagnetic radiation on biological systems because of the widespread use of high intensity electromagnetic radiation in populated areas and the controversial safety standards on EM radiation exposure in different countries. It is well recognized that the dielectric properties of a biological system determine the coupling and absorption of non-ionizing electromagnetic energy into the system. As a matter of fact the dielectric properties of a substance are interpreted in terms of the electric moment, both permanent and induced, of the molecules of the sample. One of the advantages of the dielectric studies is that it is capable of measurement in-vivo stage and the effect of water molecule is included in the investigation. Instead of using presently prescribed frequency range (2450 MHz), it is found that 915 MHz is more efficient for deep tissue heating (Schwan, 1980). For the electromagnetic waves propagating in a tissue medium, different tissues are characterized by wave impedances and also by equivalent impedances at various tissue interfaces representing the discontinuity. The characteristics of the incident wave propagating through layers of lossy tissue media and the power transfer through each boundary of the layer can be calculated from the change in wave dependent values across that boundary which as such is dependent on the relative permeability and permittivity values. The frequency dependence of dielectric permittivity and permeability are related to the polarization of the molecules and structural interface due to the application of electromagnetic field in the tissue medium. Thus, prior knowledge of the properties of tissues is essential to effectively employ the electromagnetic radiation in its beneficial uses like electromagnetic induced hyperthermia. The data suggest a clinically useful frequency range of the order of 100–1000 MHz. To alleviate problems regarding reflections at different interfaces,

values of relative characteristic impedances of different tissues are to be computed correctly. It is the amplitude and phase angle of the complex characteristic impedance which determine the absorbed power density in a tissue layer. In most cases, compared to the dimension of the microwave applicator, tissue will behave like planar structure which simplifies our more complex problem into simpler form. Here we are presenting complex impedance of all important organs of albino rats in-vitro system each of the organ being semiinfinite dimension and fresh to ensure same physiological condition as that in living conditions. The experiment has been carried out for the frequency range 100–1300 MHz for all vital organs, like muscle, heart, lungs, spleen, kidney, brain, liver. At 900 MHz, absolute magnitude of impedance $|Z|$ is 19.04 and phase angle $\tan \theta = 2.81$ for muscle. For liver, $|Z| = 33.13$ and $\tan \theta = 3.04$. For other organs, these values are in between that of muscle and liver. With suitably designed coaxial cell, we have measured separately the transmission loss of the biological samples like heart, spleen, lungs, kidney, liver, muscle, brain and also the associated phase shift for the completeness of the experiment. At 900 MHz, liver has the lowest transmission loss 3.58 db/cm and phase angle change of $69.84^\circ/\text{cm}$, whereas spleen has the highest loss 7.92 db/cm with $60.40^\circ/\text{cm}$ phase change associated with it. The loss tangent which is primarily proportional to the conductivity of the tissues may be accounted as another useful parameter for estimation of heating rate within the tissue. We have employed the technique of open-ended coaxial line method (Gajda et al. 1983) for estimation of $\tan \delta$ for various organs in the same frequency range. At 1 GHz, liver has the lowest loss tangent (0.307), whereas testis have the highest 0.393. We have expected that the three parameters, transmission loss, characteristics impedance and loss tangent will provide necessary data of different biological specimens to empirically model the heating pattern within it.

Properties of biological medium may be different in-vitro state because of absence of blood flow and possibility for physiological processes. The dielectric properties of living system in-vivo will provide a significant role in the interaction processes between tissue and electromagnetic energy. In our present studies, we are particularly concerned with the physical properties of intercellular water on a pico second time scale. Interest centers around 1 GHz considering its importance in microwave diathermy. We have chosen monopole antenna technique (Burdette et al. 1980) for in-vivo measurement of dielectric properties of the biological system in the radio and microwave frequency (400–1300 MHz). The concept of measurement is derived from antenna modelling theorem. Short monopole antenna is properly

designed for this purpose and terminal impedance is measured analytically using Network Analyzer. From terminal impedance, the relative dielectric constant and loss factor are computed. The maximum decrement in the dielectric constant ϵ' is found in the case of lungs (40–28), whereas for spleen, the change is the least. It is found at 1 GHz, lungs have the lowest conductivity ($10.1 \text{ mmho cm}^{-1}$), whereas liver has the highest value ($16.9 \text{ mmho cm}^{-1}$). Assuming that biological samples can be modelled as a homogeneous suspension of low permittivity, non-conducting material in bulk free water, solid content of the tissues are determined. Bound water attached to different organs is estimated and using Rayleigh mixture theorem, under certain simplifying conditions, protein content in particular systems are estimated. It is observed that in all cases, the dielectric dispersion can be approximated by cole-cole function with slight spreading in distribution parameter of relaxation frequencies. The relaxation frequency and dielectric constants for cerebrum (317 MHz) is different from that of cerebellum (264 MHz). It is hoped that our present knowledge regarding different sections of brain will enable us to model human brain in more realistic fashion when heating profiles with irradiation of microwave are considered (Joines, 1976).

We have also tested the applicability of this measurement process to lossy liquids by carrying out measurement to known liquids. The dielectric dispersion curve has been reported to be of molecular significance and helps interpreting the macroscopic matter in molecular level particularly for complex system (Grant et al. 1971). The dielectric measurements have been examined in aqueous solution of some proteins, but it appears that most of the measurements are limited up to 100 MHz (Grant, 1968). The extra dielectric dispersions have been studied in the frequency range of 0.4–1.2 GHz for Trypsin and Ascorbic acid. These enzymes though present in traces in living system, play a vital role in the development and maintenance of the organism. In order to obtain information on the behaviour of solutes in water, we have calculated the relaxation frequency f_r and α , which is a measure of the spread of relaxation time. For 10.5 gm/dl concentration, the relaxation frequency for Ascorbic acid and Trypsin turns out to be 1914 MHz and 1279 MHz, respectively. The dispersion observed is explained in terms of bound water attached to the protein molecules and estimations of bound water have been carried out for these proteins.

Recently electric stimulation has been used successfully in the treatment of non-unions and congenital pseudoarthrosis. An electromagnetic pulse stimulation contains a spectrum of wide frequency range. For optimizing pulse parameters, data on the variation of electrical

properties with frequency is needed (Reddy et al. 1984). The study of dielectric properties will provide the necessary information to understand the bulk electrical properties of this living tissue. The living bone is anisotropic in character and inhomogeneous in nature with fluid filled pores. This has prompted us to carry out experiments in-vitro stages on standardized bone samples. So far no attempt has been made in the frequency range 100–1000 MHz for the measurement of dielectric constants, although it has been reported that many protein solution exhibit a small but distinct dielectric relaxation in this frequency range (Grant et al. 1968), which is attributed to the fraction of water which is bound to the protein molecules. The bound water is reported to play a very important role in physiological processes of bone. Using a network analyzer system, we have modified open-ended coaxial line technique to measure the complex sample impedance for dry and fluid saturated bone in the frequency range 400–1300 MHz with better phase resolution and accuracy. Dielectric permittivity and conductivity data are computed from the impedance data in this frequency range which enable us to discuss the probable mechanisms that may be responsible for this dispersion properties in the light of bound water hypothesis. To assess the nature of bonding in bone and its relationship to dielectric constant, UV irradiated bone has also been studied. Dielectric responses of collagen, a major component of bone and a protein whose structure is well known are also studied. We have found that relaxation frequency in case of UV irradiated bone (801 MHz) is markedly different from that of normal bone (1022 MHz). For collagen the relaxation frequency is 518 MHz. We have ascertained the amount of bound water that can be associated with collagen with its present positional configuration within the bone matrix from this dielectric data. Bound water in collagen is reported to play very significant role in its stability and function.

As a next step we have designed microstrip lines with bone material as substrate and analyzed the dielectric behaviour of the substrates in two orthogonal direction at the fundamental frequency of the time domain reflectometer. We have used time domain reflectometer for measurement purposes to identify each reflection as an individual event. It is hoped that the technique will help us to know the dielectric properties of dry and wet bone, when it will be extended to higher frequencies where other conventional methods are not accessible.

Concern about occupational and public health aspects has led to the development of radiation protection guides and establishment of exposure limit. Apart from injuries ranging from local lesions and

necrosis to gross thermal stress due to hyperthermia with the exposure of high level radiation, there are however, reports of nonthermal effects occurring at much lower power level, which cannot cause any appreciable thermal effects. The reported increase of calcium efflux in cat's brain with the exposure of amplitude modulated pulse microwave radiation is supposed due to direct action of microwave energy in the CNS system (Bawin et al. 1975). The object of our next study is to investigate the physiological and hematological responses in rats at their developing periods due to daily exposure with 7.5 GHz continuous (1 KHz modulation) microwave exposure for 60 days. The power level (0.6 mW/cm^2) is much below that of prevailing safety standard (10 mW/cm^2). The animals are irradiated in anechoic chamber with plane waves. The daily foodwater intake for the exposed animals are found to be decreased which is reflected in their reduced body weight compared to the control animals. The weights of spleen, brain and ovary of the exposed animals have been reduced considerably. This suggests that some specific localized effect may be caused due to irradiation. The total white blood cells and eosinophil counts are considerably increased in the exposed group. However, from the reduced brain weight of exposed animals, it is felt that the reduced growth is not the result of direct body heating but may be from some other stimulating mechanism.

We have already mentioned that the alternative modality of non-ionizing radiation in tissue characterization and hyperthermia is ultrasound wave. Further improvement in ultrasonic pulse echo diagnostic equipment need improvement of the resolution power of the instrument, particularly for those organs like heart valves, blood vessel walls etc., which are thinner than the present length of resolution. The easiest venture from above discussion is to go towards higher frequency. But at higher frequency important data of other factors like attenuation, velocity and scattering in case of biological samples are not available in the literature. This is possibly because broadband transducers are not available at high frequency specially higher than 15 MHz. Recently in our laboratory a variety of materials was prepared out of mixing major bone components with various inorganic compounds, which are highly piezoelectric. The properties can be manipulated depending upon the demands of the situation. A low Q value suggested a fairly wide band transducer [(Singh et al. 1984)]. We have used bone matrix to obtain transducer in the standard configuration with its upper surface properly matched. Its response in the frequency range 1 – 100 MHz is examined. A miniature probe using bone matrix has also been made filling onto the tip of a 20 gauge needle. Attempt is made to match upper surface

of the bone matrix by forming a film of polyvinyl alcohol at the upper face. It is found that this miniature transducer has a good response in 1–100 MHz frequency range and can be useful tools in field sampling. As a next step we have tried to analyze the field pattern of the bigger transducer at 35 MHz in water, 0.9% saline and phantom material mimicking soft tissue structure. The composition of [the phantom material is taken from standard literature (Madsen et al. 1978). We have scanned the field with the help of our designed miniature transducer and particular frequency is chosen on the consideration that at this frequency, the bone matrix transducer gives maximum output. This corresponds to the resonance at fundamental frequency, (35 MHz). From the data we have found that at high frequency, attenuation in saline is higher than that in water and in phantom material, it is still higher. Power law governing the relationship of attenuation with frequency has been tested. Finally we have determined attenuation coefficient of some biological tissues viz. muscle and liver at 35 MHz. The physical mechanism of attenuation working in this higher frequency range has been discussed.

It is hoped that our data will help in providing basic data to consider the feasibility of applying high frequency ultrasound beam for hyperthermia purposes. It is expected that this work will provide opening of a similar studies in other biological media whereby mechanism of energy transfer in this frequency range could be examined.

A Statistical Mechanical Approach to Ecosystem Analysis : The Relative Abundance Pattern of Species in a Multi-Species Ecosystem

Balwant Singh

Sup : Prof. L.K. Pandey

Ecosystems are complex multi-species assemblies. One of the very important aspect of community structure lies in the relative abundance pattern of various species. A plot of the number of individuals versus the corresponding number of species gives a relative abundance pattern of species for the community.

The first systematic attempt to study such structural patterns was made by Corbet, Williams and Fisher (1943), and latter by Preston (1948). They analysed some data on entomological collections and used theoretical arguments to establish a mathematical relation between the number of species and the number of individuals. Preston's relation is given by

$$n = n_0 e^{-a \left[\log_2 N_i - \log_2 N_i^* \right]} \quad (1)$$

where n is the number of species corresponding to N_i number of individuals per species and N_i^* is the value of N_i corresponding to the peak of the curve. n_0 and a are the parameters of the sample size and the community structure respectively. Preston's lognormal distribution pattern of species abundances fits universally and the data on the abundances of species and is a well established result.

To understand Preston's result, we go to mathematical models of multi-species ecosystems. The mathematical models incorporate in themselves the dynamics of the system. In general, these models consist of a set of differential equations which are coupled, non-linear and very large in number. The traditional mathematical method of finding explicit solutions is of no avail for such a set of equations. In such a situation we take recourse to Statistical Mechanics, which deals with

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problems, that as a rule, describe phenomena determined by the behaviour of a very large number of particles in equilibrium. The situation in a multi-species ecosystem is somewhat analogous to that of many particle physical systems. If we confine ourselves to the study of ecosystems in equilibrium states, we may try to tackle the problem through the techniques of Statistical Mechanics.

The first attempt to develop a Statistical Mechanics of bioassociations, taking Volterra's model

$$\frac{dN_i}{dt} = \epsilon_i N_i + \sum_j \alpha_{ij} N_i N_j \quad (2)$$

$i, j = 1, 2, \dots, n$

as the model for the system, was developed by Kerner (1957). He considered only the interactions of the binary prey-predator type with the assumption that the interaction parameters α_{ij} be antisymmetric with respect to their indices i and j , i.e. $\alpha_{ij} = -\alpha_{ji}$. This assumption enabled him to establish that the system possessed a conserved quantity

$$G = \sum_{i=1}^n \beta_i q_i (e^{v_i} - v_i); \quad \frac{dG}{dt} = 0 \quad (3)$$

where q_i are the stationary state values of N_i given by

$$\frac{dN_i}{dt} = 0 = \epsilon_i \beta_i + \sum_j \alpha_{ij} q_j \quad (4)$$

$i = 1, \dots, n$

and β_i are certain positive numbers.

Here the conserved quantity G is analogous to the total energy of an isolated physical system. Adopting the proposition from Gibbs ensemble theory (see Gibbs, 1902) for physical systems, Kerner defined the microcanonical ensemble in phase space for the system under consideration, in terms of the density function.

$$P = P_0 \delta(G - G_0) \quad (5)$$

where δ is the standard Dirac delta function and P_0 is a numerical constant.

Further, on finding a temperature like quantity θ , called the "ecotemperature" corresponding to the conserved quantity G and adopting the definition from Gibbs' theory, Kerner defined the canonical ensemble for the system via the density function

$$P = K e^{-G/\theta} \quad (6)$$

where K is a numerical constant.

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From the above result Kerner was able to derive the distribution for the relative abundance of species, which though not exactly the Preston result, was still very interesting.

Using exactly the same approach for the Gompertz model

$$\frac{dN_i}{dt} = \epsilon_i N_i + \sum_j \alpha_{ij} N_i \log N_j, \quad (7)$$

$$i, j = 1, 2, \dots, n$$

Gunasekaran and Pande (1982) derived the lognormal distribution pattern for the relative abundance of species.

Though Kerner's theory is quite fascinating and elegant, it suffers from a serious drawback, which stems from the assumption that the community matrix $\{\alpha_{ij}\}$ of the system be anisymmetric. This assumption is quite restrictive and consequently Kerner's approach is applicable to even numbered species ecosystems only. It fails when the number of species is odd.

The present work explores the possibility of constructing the microcanonical and canonical ensembles for ecosystems described by Gompertz model without recourse to the antisymmetry constraint on the interaction matrix $\{\alpha_{ij}\}$. The Gompertz model retains its solvability property for multi-species interacting systems. This solvability characteristic of the model has been used to identify some constants of motion for the system without imposing the antisymmetry condition on the matrix $\{\alpha_{ij}\}$. The method so developed is therefore applicable to all ecosystems irrespective of whether they contain an even or an odd number of species.

A point of crucial importance in the present approach is that we have, in principle, a knowledge of the form of the solutions of our model. Our knowledge of these solutions have been exploited to calculate the microcanonical ensemble volume Γ and hence the expression for the entropy of the system is $S = \log \Gamma$ (8)

Now, corresponding to each conserved quantity of interest for the system, we established a generalized temperature with the property that in equilibrium all these temperatures must correspondingly be equal to those of the surroundings, separately. This facilitates the construction of the canonical ensemble in a straight forward manner. The canonical ensemble density function has the form

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$$P = K e^{-\sum_{i=1}^k \frac{M_i}{\sigma_i}}, \quad (9)$$

where M_i are the k conserved quantities in question and σ_i are the corresponding generalized temperatures; K is the normalization constant.

The most important outcome of our approach is that we get the lognormal distribution for the relative abundance of species.

An additional point of information that seems to emerge is that the distribution is well defined so long as there are enough oscillatory terms in the solutions and ill defined if the number of such terms begins to decrease.

In the present work we sensed that the distribution tends to become ill defined also when the number of interaction terms (i.e. the elements in the matrix $\{\alpha_{ij}\}$) begin to decrease. So it is possible to speculate that the data on the relative abundance of species seem to favour a situation of more "connectivity". Ecosystems may thus acquire stability only if there is sufficient complexity in them.

Nature of Chemical and Dissolved Load in the Yamuna River Basin

Prafulla Kumar Jha

Sup: Prof. V. Subramanian

Examination of mechanism by which weathering, erosion and various anthropogenic activities influence river loads and a quantitative assessment of the contributions from these sources require measurements of dissolved and suspended material transport. The growing need for such information, which has been spurred on by man's increasing impact upon river systems and the necessity of maintaining water quality has expanded the study of river loads. Solute transport studies extended to include geomorphological investigations of rates of chemical denudation and the relative efficacy of mechanical and chemical erosion, biogeochemical cycling in small drainage basins, assessment of material transport to the oceans, concern for the environmental impact of non point pollution and other human activities and the use of hydrochemical properties to elucidate runoff processes.

However, it is often not possible to extrapolate results from one basin to another, or even to compare data within different parts of a single basin because of contrasting basing characteristics and also the different techniques of water sampling used. Contributing to this difficulty has been the lack of knowledge on general mechanism of behaviour, which could aid in comparative studies. Part of the difficulty in obtaining information on these mechanisms has stemmed from the type of data evaluation employed. As a result many conflicting estimates have been predicted by authors. Aurada (1983) suggested the probable value of total global denudation as $22 \times 10^9 \text{ t year}^{-1}$, out of which mechanical denudation accounts for $18.4 \times 10^9 \text{ t year}^{-1}$ (83.6%) and chemical denudation comprises $3.6 \times 10^9 \text{ t year}^{-1}$ (16.4%) only. His estimates agree with that of Holeman (1968) and Meyback (1976) but, differ from Milliman and Meade's prediction ($13.5 \times 10^9 \text{ t year}^{-1}$). Out of the total mass transfer to the oceans world rivers carry 90% of it.

It has been observed that Asian rivers with 11% of world drainage area contribute 70% of the global sediment input. Still, Asian rivers have not been properly studied. These rivers are important in the sense that they support a large population and are under intense human activities.

There exists a little information on the geochemical nature of Indian rivers. The contribution of Indian rivers to global runoff is in the order of $16 \times 10^{11} \text{ m}^3 \text{ year}^{-1}$ i.e. about 5% of the global runoff. The estimated sediment transport of Indian rivers is $1.21 \times 10^9 \text{ t year}^{-1}$, i.e. about 10% of Milliman & Meade's global estimate. The rate of physical denudation ($327 \text{ t km}^{-2} \text{ year}^{-1}$) of Indian subcontinent is more than twice the world average ($150 \text{ t km}^{-2} \text{ year}^{-1}$). The chemical transport of entire Indian subcontinent is estimated as 270 million tons/yr and the solute yield ($69 \text{ t km}^{-2} \text{ year}^{-1}$) is twice the global average ($35 \text{ t km}^{-2} \text{ year}^{-1}$). Due to lithological and climatological differences between the peninsular and extrapeninsular region of India, rivers show wide geochemical variation. The Ganga and Brahmaputra draining through the higher basin elevation carries more total load than the Narmada, Tapi, Godavari, Krishna and Cauvery which flow through the region of comparatively low basin elevation. Ganga carries total load 93 times more than the Cauvery. The chemical to sediment load ratio (C/P) shows that the central and peninsular rivers are chemically more active than the Himalayan rivers. Ganga and Brahmaputra contribute 118 million tons/yr as dissolved load to the Bay of Bengal. This accounts for about 3% of the global supply of dissolved salts to the oceans.

The Yamuna river basin encompasses 366221 sq km and constitutes 42.5% of the Ganga drainage. At Allahabad—the place of confluence which the Ganga—the average annual discharge (93020 million cu. m. of the Yamuna exceeds that of Ganga by a factor of 36.6%. Throughout its length (1376 km) it criss-crosses the varied topographic, lithologic and climatic zones. The lithology of the Yamuna basin shows diversity both in composition and chronology. The basin consists of parts of the extra peninsular regions (lower Himalaya), alluvial plains and the peninsular regions (mainly Deccan trap). On its bank are situated historically old as well as industrially new cities. The intense human activities has resulted in the chequered land use pattern (arable land 60%; nonarable 27.5% and forests 12%). The mining operations are confined to nonarable part of the basin. Present study deals with the nature of chemical and sediment load of the Yamuna so that its geochemical characteristics in terms of water chemistry, sediment minera-

logy and chemistry and elemental mass balance etc. can be understood. A systematic study is essential for the better exploitation and management of river basins.

Extensive sampling was done during 1982-83. Seasonal analysis for major cations and ions of water was carried out following the standard practices. Sediments were analysed for various size population, its mineralogy and chemical composition were determined. Based on the experimental data chemical and sediment mass transfer were computed.

Dissolved Load

The major ionic constituents of the Yamuna water show not only the spatial and temporal variation but also the seasonal influence. Sodium varies from 1% to 15% and chloride fluctuates between 4%—22% of the total dissolved solids (TDS) depending upon the season. Discharge and season show pronounced influence on TDS concentration. The highest concentration (418—768 ppm) is observed during monsoon and intermediate concentration (290—650 ppm) during summer. During winter the TDS show the minimum values (190—645 ppm). Due to high dissolved load of the tributaries, the downstream dilution of TDS does not take place. On an average the dissolved load accounts for 13%—42% of the total load. At Allahabad the Yamuna annually supplies about 42×10^6 t of dissolved load to the Ganga. The chemical load to sediment load (C/P) ratio, is less than one, signifying the dominance of sediment load. The tributaries, Chambal, Betwa Ken show higher value of C/P ratio. These rivers seem to be chemically more active than the Yamuna. The values of C/P ratio are in good agreement with that of the Ganga and its tributaries. This shows that in all the Himalayan rivers similar condition of weathering prevails.

Among the dissolved heavy metals the most mobile Fe and Mn. show unsystematic variation. It seems that adsorption and desorption are the influential mechanism which regulates the heavy metal concentration.

It has been felt that rock dominance, atmospheric precipitation, ground water seepages and cities waste disposal affect the TDS concentration.

Sediment load

Like TDS, the suspended sediments are controlled by discharge. Fair weather flow favour the higher concentration (800 ppm—3000 ppm)

of suspended matter (TSM) and lean season flow show low concentration (1 ppm—85 ppm). Many factors such as rain-wash, flow turbulence, and human interference influence the TSM content. The discharge regulation by the upstream dams, reservoirs and canals adversely affect the natural budget of TSM. The suspended load constitute 58-86% of the total load. Globally, river transports 90% of the load in the form of suspension. Yamuna discharges 64×10^6 t of sediments into the Ganga at Allahabad. This much of sediment input increases the sediment load of the Ganga. At Kannauj the sediment load of the Ganga is 15×10^6 t whereas at Allahabad it jumps to 228×10^6 t. In terms of sediment load, among all the tributaries of the Ganga, Yamuna ranks second the first being Ghaghra. The earlier reported (Abbas & Subramanian, 1984) sediment load of the Yamuna is based on only one sample and shows higher values because it is not discharge weighted.

The TSM/TDS ratio shows that upstream the physical weathering is dominant, whereas downstream the chemical weathering becomes prominent. On the basis of dissolved and sediment load it has been observed that the water quality of the Ganga is influenced by the inputs from the Yamuna.

Sediment characteristics

The size characteristics of the Yamuna sediments are controlled by the grain size available in the alluvium, through which the river flows. Among the clay minerals the most abundant is illite followed by chlorite and Kaolinite. The evaluation of clay mineral composition of the Yamuna suggest the lack of extensive pedogenesis in the area. The degradation of mica of the source rock has produced abundant illite. Chlorite owes its source to degraded chlorite of metamorphic rocks and Siwalik sediments. Kaolinite must have come from the alteration of feldspar. However, the high rate of sedimentation (the reported value around Delhi is 4.2 cm/yr. determined by Ra^{226}/Pb^{210} method) has allowed partial Kaolinization of feldspar. At places, marked by extensive swamps and ponds, montmorillonite is present in traces. In the tributaries of the Yamuna chlorite is absent and Kaolinite is comparatively abundant.

The abundance of clay minerals in the suspended sediments compared to core sediments exhibit the control of grain size over the mineralogy. Quartz and feldspar content decreases with the abundance of clay minerals in the suspended sediments compared to core sediments

exhibit the control of grain size over the mineralogy. Quartz and feldspar content decreases with decreasing grain sizes and clay minerals show a general increase. In most of the samples feldspar is absent in the 1-0.5 μm size group. Carbonate minerals do not show any control of the grain-size variation.

Yamuna sediments due to the marked absence of glycol expandable clay minerals (GECM) differ from that of peninsular rivers (Narmada, Tapi, Krishna, Godavari and Cauvery). The Yamuna differs from the Mahanadi, Brahmi, Vamsadhara also because it does not contain equal proportion of GECM, illite and Kaolinite. The Yamuna sediments shows nonsimilarity with the Ganga Sediments because it (Yamuna) contains more kaolinite. It seems that the rock dominance and redistribution of sediments along channel are responsible for the characteristic mineral assemblage.

Chemically too the Yamuna sediments is distinct. The suspended sediments excepting K, Ca, and Zinc show higher elemental values than the world average. The Yamuna, its tributaries and the Ganga exhibit marked variation in carbonate based elements (Ca, Mg, Ba, Sr etc) due to availability and non-availability of carbonate minerals in the source rock. Nearly all metals show enrichment in the TSM. The clay minerals finer grain size and associated organic matter help the chemically mobile metal to enrich in the suspended sediments. 60-80% of metals in the Yamuna sediments in Delhi are in non-residual fraction and ready for remobilization depending upon the local environmental condition. The very high metals load around Delhi is not seen in the downstream sediments. The loss of the heavy metals downstream of Delhi is due to the removal of sediments (as building materials) and dilution from the relatively less polluted tributaries. The organic carbon show extreme affinity for the trace elements. The remobilization of toxic metals from the sediments and organic matter may be hazardous. The three chemical sinks—carbonate fraction, organic fraction and the metal hydroxide fraction—contribute variable amount of individual metals to the chemically mobile fraction.

Erosion Rate

The TSM/TDS ratio exhibit the preponderance of physical weathering upstream. There exists a negative relation between the basin area and the total erosion rate. This is in confirmity with the global trend but is in disconfirmity with the Ganges trend. Like world rivers and the Ganga, the chemical erosion and sediment erosion show a positive

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relationship. Upstream the Yamuna removes $1.04 \text{ mm year}^{-1}$ of the basin surface and the removal rate decreases downstream and becomes $0.19 \text{ mm year}^{-1}$ at Allahabad. The average chemical erosion rate ($165 \text{ t Km}^{-2} \text{ year}^{-1}$) of the Yamuna is much higher than the Ganga and Indian average. Tributaries of the Yamuna are more chemically active. The total erosion rate of the Yamuna ($973 \text{ t Km}^{-2} \text{ year}^{-1}$) is 1.7 times higher than the Ganga.

The maximum mass transfer takes place in the form of suspended sediments. Out of the elements analysed, the elemental flux for Na, K, Ca and Mg constitute 45-90% the suspended load. Inorganic carbon and calcium together constitute 34-60% of chlorite 10-28% and dissolved silica 3-10% of the dissolved load.

Studies on Amino Acid Uptake in Protoplasts of Higher Plants

Inam Dureja

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During the last few years, many efforts have been made in the use of isolated protoplasts for membrane transport studies because of their large scale isolation and multifold advantages. The present study was aimed at the characterization of the uptake systems of amino acids in protoplasts of higher plants and to study the development related changes in the lipid composition and uptake characteristics of amino acids.

As pea protoplasts do not regenerate easily but are obtained in high number, they were used for the characterization of uptake systems of amino acids and to understand the problem of regeneration with respect to transport property of the membrane. Since regeneration of these protoplasts could not be achieved in the present investigation, the callus cultures and callus derived protoplasts of *Nicotiana tabacum* (which has been used as a model system) were used to study the changes in the lipid composition and uptake characteristics of amino acids during development.

The techniques of tissue culture, protoplasts isolation by one step enzymatic digestion, vacuum filtration to assay the transport activity of amino acids, column and thin layer chromatography of lipids and spectrophotometric methods of quantitative determinations were employed in the present study. Following are the main results achieved :

1. There was no significant difference in the rate of uptake of amino acids in pea protoplasts, however, the extent of accumulation was different for different amino acids.

2. The uptake of all the amino acids was found to be pH dependent in pea protoplasts; the pH optima being different for different amino acids.

Low optimum pH (4.0) for the uptake of L-leucine indicated the existence of a symport mechanism of amino acid transport in these protoplasts.

3. The uptake of L-leucine and L-lysine was mediated via an active process, since the uptake was reduced by the presence of metabolic inhibitors.

Glycine uptake, however, was found to occur by facilitated diffusion process as its uptake was not inhibited by any of the metabolic inhibitors.

4. It was shown that the plasmalemma ATPase is involved in the transport of L-leucine and L-lysine, since their uptake was found to be sensitive to plasmalemma ATPase inhibitors.
5. The uptake of L-leucine, glycine and L-lysine in pea protoplasts was shown to be multiphasic over a wide range of concentrations. It is postulated that a single carrier is responsible for such uptake characteristics, which changes its conformation at a critical external solute concentration.
6. The mode of energy coupling was found to be different in different phases of the multiphasic uptake, as revealed by the study of L-leucine uptake at four different concentrations. At lower concentrations employed, its uptake was energy dependent, whereas at the higher concentrations uptake was revealed to be similar to facilitated diffusion.
7. Inhibition of L-lysine uptake by the presence of another basic amino acid only and that of L-leucine and glycine by several other amino acids indicated that L-lysine uptake is mediated via a specific uptake system for the basic amino acids, whereas L-leucine and glycine share the same uptake system in pea protoplasts.
8. Callus cultures of *Nicotiana tabacum* were found to contain PC, PE, PI, PS, PG and PA (phospholipids); MGDG and DGDG (galactolipids); SL and neutral lipids as their membrane lipid constituents.

9. Upon its transfer to the greening and differentiating medium, the callus cultures of *Nicotiana tabacum* were shown to undergo greening followed by the formation of shoots on 28th day. This was associated with an increase in the chlorophyll, protein, dry weight and total lipids.
10. A significant increase in the galactolipid content concurrent with a decrease in the phospholipids was observed on 28th day in the greening and differentiating callus. The increase in the galactolipid content was mainly due to the increase in MGDG, indicating the chloroplast development in these tissues.
11. Among the phospholipids, PC level decreased gradually during greening and differentiation, however, the level of PI revealed a sudden fall only on 28th day by which time the differentiation had been observed. It is speculated that PI might play a role in the differentiation process in plants.
12. Senescing callus cultures of *Nicotiana tabacum* revealed changes in its lipid composition which were of qualitative nature. A significant decrease in protein and total lipid content was observed in this callus. This was mainly due to a drastic fall in galactolipids and a significant loss of phospholipids. Neutral lipids, phosphatidic acid among phospholipids and lysoderivatives of PC and PE were the main constituents of senescing callus.
13. The level of accumulation of L-leucine in the protoplasts of non-green, and greening and differentiating *Nicotiana tabacum* callus was almost similar, whereas it was found to be higher in the protoplasts of the senescing callus.
14. L-leucine uptake was shown to be dependent on metabolic energy and also involved plasmalemma ATPase in the protoplasts of non-green, and greening and differentiating *Nicotiana tabacum* callus. However, it was found to be mediated by a passive mechanism in the protoplasts of the senescing callus.

Our understanding of the transport mechanism in plants has been facilitated by the exposure of membrane surface of plant cells through the removal of the cell wall and subsequent isolation of plant protoplasts. Today we know that the transport of most of the amino acids is carrier mediated, active and multiphasic. The most favoured

hypothesis to account for the active transport of sugars and amino acids in higher plants is proton/substrate co-transport complex. There are evidences for the existence of proton ATPase, responsible for energizing solute uptake and also that a transmembrane redox system is capable of generating an electrochemical gradient for active solute uptake.

Much remains to be done, however, especially with regard to the measurements of unidirectional fluxes at each membrane and quantification of the electrochemical gradients. To prove that active transport is occurring, it is necessary to show that energy-linked transport is against an electrochemical potential gradient. Studies are also required in order to characterize transport mechanisms at each membrane (the use of isolated vacuoles may be particularly useful here) and to understand the molecular basis of complex uptake kinetics and active transport systems. Further, it will be interesting to understand the relationship of the NADH-oxidizing system to the ATP-driven H^+ -sugar and H^+ -amino acid cotransport system

Microbial transport is understood far better than transport in any higher organism because of the isolation and characterization of the transport mutants. Much effort is yet to be made in plants to isolate the permeability mutants and in elucidating their significance in transport phenomena as mutants are the powerful tools, which provide us with a way of dissecting normal functions into component parts.

Our results have indicated that there is a significant change in PI level during differentiation but not in the uptake characteristics of amino acids. It is thus possible that PI might have a role in the differentiation of plants which, however, is not related to the amino acid uptake. The changes observed in different lipid composition and amino acid transport are of preliminary nature but they nevertheless emphasize the need to have more detailed studies to understand the role of PI in plants.

Investigation into the Mechanisms of the Radioprotective Effect of MPG, Cysteamine, WR-2721 and Thioproline on the Biological System

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The present study is devoted to an investigation into the mechanisms of certain nitrogen compounds containing sulfur, known for their capacity for protecting animals against the effects of ionizing radiation. The free-SH group containing compounds cysteamine and 2-mercapto-propionylglycine (MPG), and the non-free SH compounds S-2-(3-amino propylamino) ethylthiophosphoric acid (WR-2721) and thioproline have been found to be protective both in *in vivo* and *in-vitro* systems. These drugs are chosen because of the variation in their chemical structure, particularly, in the arrangement of the functional-SH group. Although, the protective action of sulfur containing compounds against ionizing radiation may be due to the pharmacological mode of action, radical scavenging and/or hydrogen atom donation, repair of reversible damage, etc., the precise mechanism of action by which these chemicals protect the normal cells still remains largely unknown. In order to unravel the mechanism of action of these sulphydryl drugs, studies were undertaken to assess the effects of these drugs on the free radicalinduced radiation damage.

Lipid peroxidation of the membrane by radiation is a free radical phenomenon. Hence, it is an ideal system to study the radical scavenging and/or hydrogen atom restitution of these drugs (Chapter II). Therefore, it was considered appropriate to assess the effect of these drugs on the radiation-induced lipid peroxidation and the after-effect-enzyme release, if any, and inactivation of membrane bound enzyme-acetylcholinesterase.

Chapters IV, V, VI and VII are devoted to MPG, cysteamine, WR-2721 and thioproline respectively. Each drug is covered in a

chapter, since our preliminary experiments showed different mode of actions by each of these drugs. For example,

- (i) MPG at high concentration did not give protection to microsomes, instead resulted in sensitization.
- (ii) WR-2721 rendered protection only to microsomes but not to erythrocytes.
- (iii) Cysteamine induced damage to microsomes and erythrocytes.
- (iv) Thioproline did not give protection to microsome and erythrocytes.

CHAPTER IV

As assessed by the current data on lipid peroxidation, the radio-protective effect of MPG appears to diminish with the presence of Fe^{2+} in the biological system. In fact, the formation of MPG/ Fe^{2+} complex was found to be responsible for the enhancement of radiation-induced lipid peroxidation. The enhancement of radiation induced microsomal lipid peroxidation, even in the absence of exogenous supply of Fe^{2+} under certain conditions supported that Fe^{2+} may be exposed or released from microsomes after irradiation (Wills, 1970). Our results showed that this Fe^{2+} was responsible for the enhancement effect. However, the protective effect which was observed in erythrocytes, under the same conditions, suggests that, possibly, Fe^{2+} was not released from erythrocytes. This was further confirmed when the exogenously provided Fe^{2+} enhanced the radiation-induced lipid peroxidation of erythrocytes. Thus, it would seem that MPG was protective only in the absence of MPG/ Fe^{2+} complex and the protection, when resulted, was possibly due to radical scavenging and/or hydrogen atom donation.

Support to the above-said contention was deduced from the data on the release of acetylcholinesterase-an erythrocyte membrane-bound enzyme. Our results showed that the release of the enzyme by irradiation was inhibited by MPG. The trend of MPG in reducing the enzyme release was similar to that in the reduction of lipid peroxidation. It was suggested that the radiation-induced lipid peroxidation was responsible for the enzyme release and any protection against lipid peroxidation by any radical scavenger could certainly be expected to cause a decrease in the release of enzyme.

Further, studies on the enzyme damage had thrown some light on the mechanism of radiation-induced enzyme damage. The results showed that the enzyme damage might be caused by the following processes :

- (i) Direct effect of radiation
- (ii) Effect of free-radicals on the enzyme *in-situ*.

CHAPTER V

Cysteamine was found to give protection which was probably due to hydrogen atom transfer/or scavenging. However, the protective effect seemed to be reduced by the damaging effect of cysteamine. The damaging effect of cysteamine was found to be dependent upon its concentration and the pre-and post-irradiation incubation. It was also demonstrated that Fe^{2+} ions did not play any role in the damaging effect of cysteamine. Studies on the enzyme release and its damage further supported the contention that cysteamine by itself induced some damage and this caused an overall reduction in the magnitude of protection.

CHAPTER VI

- (i) WR-2721 was found to give protection to the lipid by decreasing radiation-induced lipid peroxidation of microsomes under all conditions used.
- (ii) However, it did not reduce the lipid peroxidation of erythrocytes and the release of erythrocyte enzyme and its damage.
- (iii) With the microsomal treatment, WR-2721 rendered protection to erythrocyte against radiation-induced lipid peroxidation.
- (iv) It would seem that microsomal fraction could bring about the dephosphorylation of WR-2721 into a free SH containing compound. This was not observed in erythrocytes possibly due to the inadequate quantity of hydrolytic enzymes. However, further experiments have to be carried out to confirm the dephosphorylation of WR-2721 in these systems.
- (v) WR-2721 enhanced the spontaneous lipid peroxidation of erythrocyte and microsomes. However, experiments with Fe^{2+} ions implied that WR-2721/ Fe^{2+} complex, if any, was not responsible for the enhancement effect.

CHAPTER VII

- (i) Thioproline did not give protection to microsomes and erythrocytes.
- (ii) The lipid peroxidation of microsomes was not inhibited at low concentrations of thioproline.

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- (iii) It enhanced spontaneous lipid peroxidation. However, it was not attributed to the formation of Fe^{2+} complex. This was because of the finding that the effect of thioproline in presence of FeSO_4 was due to the additive effect of this drug and FeSO_4 .
- (iv) Even after the microsomal treatment, thioproline did not exert radioprotection.
- (v) The release of enzyme was not stopped by thioproline even at high concentrations. Hence, it was presumed that the reduction of lipid peroxidation that was observed at high concentrations of thioproline was not due to the annihilation of free radicals.
- (vi) The reduction of enzyme release by thioproline in erythrocytes of low concentration at 320-480 Gy was observed at high concentration of thioproline. This was attributed to the increase in the damage of the enzyme *in situ* by radiation in presence of thioproline. This was confirmed since the pellet activity reached zero at 320 Gy but not at 480 Gy (control value). However, the mechanism of the damaging effect of thioproline was not established.

Our studies imply that a definite structure, particularly the functional group, i.e., a free-SH group, is necessary for the protective effect of these aminothiols when the protection is via radical scavenging. However, the scavenging efficiency of these drugs may also be hindered by certain factors in the system (Fe^{2+}) due to the radiation exposure and that may be the reason for MPG not giving protection under certain conditions. The same factor may be responsible for the less protective effect of MPG (DMF=1.4) in mice. However, experimental verification of this point is yet to be done.

Similarly, the damaging effect of cysteamine in the absence of irradiation has to be thoroughly investigated. Our findings suggest that its presence in the system for a long time before irradiation can lead to damage.

Our results on thioproline suggest that it does not give protection, possibly, because of its non-free-SH group. However, it has been shown that it gives protection to cell culture and *in vivo* system effectively (Vos *et al.*, 1981). It implies that its protective effect is not due to free radical scavenging. However, an indepth study of this drug by using

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pulse radiolysis would throw light on the mechanism of the protective action of this drug.

In contrast to thioproline, WR-2721 gives protection to the erythrocytes, possibly, after the unmasking of the phosphorylated SH group via radical scavenging and/or hydrogen atom restitution. Hence, in the light of our findings and Jones *et al.* (1985), it is worthwhile to investigate the dephosphorylation of WR-2721 in tumor cells. This will give a clear picture about the possible correlation between differential protection and dephosphorylation (Yuhás and his associates, Chapter VI).

Thus, our attempt to study the mechanism of these drugs has successfully revealed certain salient features necessary for the chemical radioprotection, particularly, the significance of free-SH group. In addition, it has also given a hope that the fast fading MPG drug can be revitalized in the light of our findings and is possibly expected to be a successful drug in adjunct with some drug that could prevent the 'anti-protective' compound formation.

Structural and Conformational Studies on the Radiation Induced Changes in Complexed DNA and Polynucleotides

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Introduction

Simultaneous exposure of living organisms to a variety of chemicals, drugs as well as physical agents such as radiation are often unavoidable due to rapid industrialisation and increased medical care. Hence the scientific and public concern is to whether such concomitant exposures have greater risk of causing diseases than their individual action. At molecular level the DNA is long known to be the target for the drugs and radiation that interact with the biological system. In view of the importance of DNA as the genetic material and the role played in life process, an understanding of the interaction of these agents with DNA is useful in exploring the molecular basis of their biological effects and their use in medical applications.

The Present Work

The present work is aimed at understanding the structural, conformational and thermodynamic aspects of the interaction of the drugs and/or radiation with DNA and thereby probe into the structure function relationship as well as site specificity of interaction. Keeping in view these objects, the following studies have been undertaken.

(1) Exposure of DNA to radiation, particularly UV, is known to cause specific damages such as formation of thymine dimers, cross links, hydrogen as well as single strand breaks. Attempts have been made to investigate the impact of these structural damages in DNA double helix on its binding properties with drugs. Daunomycin, which is a powerful antibiotic and used in the treatment of cancer, has been chosen for

evaluating its interaction with normal as well as irradiated DNA and thus to understand the structure function relationship.

(2) Thermodynamic aspects of the interaction of the drug and radiation with DNA have been investigated from thermal denaturation (helix to coil) studies. Both UV (non-ionising) and gamma (ionising) radiation which are distinct in their biological response have been used for investigating their effect of DNA individually as well as in combination with daunomycin. The major aim is to probe into the role of the drug in protecting the structural and conformational rigidity, thermal stability as well as cooperativity of the duplex against radiation induced damages.

(3) Biological importance of conformations of DNA is gaining significance in recent years. Attempts have also been made to look into the conformational transitions of DNA, if any, due to its interaction with drug and/or radiation from circular dichroism spectral studies.

(4) The site specificity of interaction of these agents is another significant-aspects that has been studied using synthetic polynucleotides as model system. Such studies are useful in understanding the mechanism of the changes occurring in DNA due to drug and radiation interaction.

Investigations have been carried out using several biophysical studies such as UV and visible absorption spectroscopy, fluorescence emission and polarisation spectroscopy, thermal denaturation studies and circular dichroism studies.

Summary

Analysis of our results, particularly the binodal transition of the absorbance temperature profiles at 480 nm in conjunction with Scatchard plot analysis and fluorescence studies reveals that daunomycin seems to exhibit a reinforced binding mechanism, involving both the modes of binding, intercalative as well as electrostatic.

Studies on the effect of UV radiation have been carried out to investigate the impact of specific damages on its binding properties with antibiotics. It has been observed that UV irradiated DNA binds with daunomycin in a similar manner as observed for untreated DNA, involving both the modes, viz., intercalation as well as electrostatic binding—also known as stacking. In case of UV irradiated DNA-daunomycin complexation, the binding constant K_1 computed from

Scatchard plot analysis and the fluorescent polarisation values (P) are found to be higher than the corresponding values for unirradiated DNA-daunomycin complexes. It seems that pre-irradiation of DNA followed by complexation with daunomycin seems to favour the intercalation of more drug molecules into the DNA double helix. This has been ascribed to UV induced structural flexibility of the helix as evidenced from thermal denaturation studies.

Exposure of free daunomycin to UV radiation exhibits hypochromicity of the absorption peak and quenching of the fluorescence emission peak indicating either self aggregation, dimerisation or photobleaching of the drug molecules. On the other hand, UV irradiation (upto 3024 J.m^{-2}) does not affect the intercalated drug molecules ($D/P \leq 0.125$). The drug molecules bound at the surface ($D/P > 0.125$) seems to exhibit stacking tendencies. Moreover binding of daunomycin seems to be rigid and does not come out from the binding sites in the DNA double helix on being exposed to UV radiation. Absorbance temperature studies at 480 nm leads to the conclusion that both intercalation and electrostatic binding modes are not affected due to exposure of the complex to UV radiation.

Thermodynamic aspects of drug and/or radiation interactions have also been investigated by thermal denaturation studies. Binding of daunomycin increased, the thermodynamic stability of the duplex as evidenced from the increases in T_m , T_i , T_r values. Absence of any significant change in ΔT values suggests that binding of daunomycin do not alter the cooperativity of DNA transition. Analysis of values of enthalpies of thermal denaturation (ΔH°) computed through vant Hoff plot for melting transition suggests that binding of daunomycin is an exothermic process. The observed increase in ΔH° values of DNA on binding with daunomycin has been explained in terms of formation of at least two hydrogen bonds between the bases and the intercalated drug molecule.

Exposure of DNA to UV radiation causes the destabilisation and loss in cooperativity of the duplex. Thermal denaturation studies on free DNA-UV interaction leads to the conclusion that at low doses of UV radiation ($\leq 252 \text{ J.m}^{-2}$), formation of dimers, if any, does not affect the thermal stability of the duplex. The denaturation of the duplex occurs at doses $> 252 \text{ J.m}^{-2}$ and has been attributed to the clustering of dimers in A-T rich region as well as hydrogen bond breaks and loss in base stacking.

Complexation of daunomycin with DNA prior to exposure to UV radiation seems to induce greater structural stability and conformational rigidity in DNA against UV induced damage. Comparison of ΔT_m values for UV irradiated free and complexed DNA leads to the conclusion that binding of daunomycin decreases the degree of destabilisation by as much as 50% compared to free DNA. The losses in co-operativity of the duplex due to UV radiation interaction is found inhibited on binding with daunomycin prior to UV irradiation. Similar trend is also observed in case of gamma irradiation of free and complexed DNA. Analysis of ΔH° points towards the conclusion that the induced structural stability, conformational rigidity as well as increased co-operativity of the duplex in UV irradiated complexes are probably not enthalpic in origin, perhaps the change in entropy due to daunomycin complexation contribute to the associated free energy change.

From the comparative study of poly dA, poly dT and DNA-daunomycin complexes exposed to UV radiation, it is found that binding of daunomycin to homogeneous polynucleotides of A-T sequences induces 50% more destabilisation (i.e. 50% increase in ΔT_m values) of the helix as compared to free poly dA, poly dT. However, at the same dose of UV irradiation, binding of daunomycin to DNA of heterogeneous base composition reduces the degree of destabilisation by 50%. Such observations have been explained in terms of sink and source action of daunomycin in the DNA helix. It seems that in case of heterogenous DNA, the binding of daunomycin at G-C sites acts as sink and inhibits the internucleotide energy transfer from G-C rich region to A-T rich region, thereby inhibiting the clustering of dimers in A-T tracts and reduce the degree of destabilisation. On the contrary daunomycin bound A-T sites acts as sources and probably through short range energy exchange transfer the absorbed energy to the adjacent thymines. This favours the clustering of dimers as well as greater destabilisation of poly dA, poly dT sequences.

Circular dichroism studies reveal that binding of daunomycin to DNA induces a conformational transition probably from B to A form. Intercalation of drug molecules seems to induce such transition. Analysis of CD spectra for complexed DNA as well as complexed poly dA, poly dT and poly dG, poly dC leads to the conclusion that daunomycin binding exhibits a preference for G-C sites. The observed B to A transition may be attributed to this binding.

Exposure of DNA to moderate doses of UV radiation induces conformational changes in DNA and these conformational changes have

been ascribed to local denaturation of the helix and occurs within the B family itself. On the other hand complexation of daunomycin prior to UV irradiation inhibits the above conformational changes of DNA caused by UV radiation. Perhaps binding of daunomycin inhibits the local denaturation.

UV irradiated DNA, too, undergoes B to A transition on binding with daunomycin in a similar manner as observed for untreated DNA. These results in conjunction with the findings from absorption, fluorescence and thermal denaturation studies leads to the conclusion that UV induced damages in DNA double helix does not affect either the mode of binding or the conformational transition of DNA due to its interaction with daunomycin.

Irradiation of free and complexed DNA with gamma radiation does not lead to any gross conformational change. In case of complexed DNA, changes in steric parameters of the complex at G—C sites seems to occur leading to transition within the A family itself.

Studies on the Mechanisms of Chemical Modification of radiation damage in spores of *Bacillus megaterium*

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There exists in the literature a number of physicochemical and biochemical explanations to account for chemical modification of radiation damage. These interpretations are based on the premise that chemical radioprotectors and radiosensitizers fall into two distinct categories. Accordingly, it was believed that under no circumstance, would a chemical radioprotector behave as a radio-sensitizer and *vice-versa*. This notion has, however, had to be drastically altered with the demonstration that *one* and the *same* chemical(s) could act as radioprotectors against oxic damage but as radiosensitizers of anoxic damage. Most of the data responsible for certain revelations in this field have come from the pioneering experiments of Kesavan and co-workers; they used metabolically inert barley seeds and spores. These studies provided an insight into the mechanisms which are more physicochemical than biochemical in nature. Stated in simple terms, the relevance of the possible reactivities of the chemicals towards the radiation-induced, oxygen-sensitive and -insensitive sites has been brought into focus. These sites are essentially the radiation-induced free radicals. By the term reactivity (kC), we mean the product of reaction rate constants onwards e , $\cdot\text{H}$ and $\cdot\text{OH}$ multiplied by the concentration of the chemical additive(s).

As a prelude to our understanding the radiation chemistry, the next immediate goal in this field of research has been to examine whether the primary reactivities (kCs) of the chemical additives could be directly correlated with chemical radioprotection or radio-sensitization. Since these investigations aim at correlating the known physicochemical reactions with the cell survival and its colony formation, it is necessary

to use biological systems in which physiology and biochemistry of the cell at the time of irradiation are highly negligible. Hence, the spores of *Bacillus megaterium* have been used in the present study.

These spores were irradiated in aqueous suspensions with O_2 or N_2 bubbled during irradiation. The chemical additives, when desired, were present during irradiation. In these studies, the survival curves were constructed to derive the inactivation constant (k) or simply the sensitivity. The k (KGY^{-1}) is expressed in the relationship $N/N_0 = n \exp(-kD)$, in which D is the dose, N/N_0 is the fraction surviving and 'n' is the Y-axis intercept of the extrapolated semi-log straight line at zero dose. In this, k is directly proportional to the sensitivity. Since the radiation-induced H_2O_2 has been implicated in biological damage, it was estimated in the spore suspension using the method of Hochanadel (1952). Since we do not have the facilities for fast kinetics, the data on rate constants were obtained from the literature.

In the present study, the inactivation rate constants (k) in O_2 and N_2 are 2.38 kGy^{-1} and 0.77 kGy^{-1} respectively. Thus, the OER is about 3.1. Under these circumstances, the H_2O_2 yields are $780 \mu\text{M}$ at 4 kGy and $20 \mu\text{M}$ at 7 kGy in O_2 and N_2 respectively. It is against these two values [$k(O_2)$ and $k(N_2)$] the effects of various chemical additives known for their high rate constants for $\cdot\text{OH}$ or e_{aq}^- or both, have been assessed. The effects of these radical scavengers in their different combinations have also been studied.

One of the major findings in the present study is the occurrence of an "OH-component" within the oxygen-dependent damage in spores irradiated in *fully* oxygenated conditions. These data are at variance with the earlier reports of Ewing and Powers (1976) who used 50 kVp X-rays for irradiating the spores. Their findings have implicated an "OH-component" within the O_2 -dependent damage only when the spores are irradiated in O_2 -concentrations in the range of 10^{-6}M – 10^{-4}M . The demonstration, in the present study of an "OH-component" within the oxygen-dependent damage of the spores irradiated even at high concentrations of O_2 is not only important in basic radiobiology but also relevant to cancer radiotherapy. Possible reasons for the discrepancy between the present results and those of Ewing and Powers (1976) have been analysed.

Data obtained in the present study have shown that e_{aq}^- scavenges

such as KMnO_4 and KNO_3 also protect against oxidic damage. Radioprotection against oxidic damage by chemicals which effectively scavenge e_{aq}^- has been demonstrated herein for the first time in the spores. In fact, radioprotection against oxidic damage by electronaffinic compounds would not be expected based on the premise that removal of e_{aq}^- leads to greater concentration of $\cdot\text{OH}$. The $\cdot\text{OH}$ -radicals have been already implicated in initiating damage to target molecules. In this context, it is pertinent to point out that oxygen follows, atleast partly, the same pathway for enhancing radiation damage. However, the sensitivity of the spores (k) obtained when KMnO_4 ($1 \times 10^{-2}\text{M}$) is present during irradiation is 1.63 kGy^{-1} . This clearly establishes that KMnO_4 , contrary to the expectation, affords about 46% radioprotection against O_2 - dependent damage. This value is not affected by $t\text{-BuOH}$ ($5 \times 10^{-2}\text{M}$) when it is mixed with KMnO_4 ($1 \times 10^{-2}\text{M}$). The sensitivity of the spores (k) when KNO_3 ($1 \times 10^{-2}\text{M}$) is present during irradiation is 2.06 kGy^{-1} . Thus, about 15% protection is afforded by KNO_3 , another electron-affinic compound. When $t\text{-BuOH}$ ($5 \times 10^{-2}\text{M}$) is mixed with KNO_3 ($1 \times 10^{-2}\text{M}$), the k -value is 1.73 kGy^{-1} . The k -value obtained when $t\text{-BuOH}$ ($5 \times 10^{-2}\text{M}$) is present alone is 1.63 kGy^{-1} . These data reveal the presence of a "non- $\cdot\text{OH}$ -component" when spores are irradiated with KMnO_4 in O_2 . Here, radioprotection is the result of the competition of KMnO_4 with O_2 for the electrons. The end-result of such a competitive reaction will be the overall reduction in the yield of O_2^- . It may well mean that the radioprotection by KMnO_4 arises from partial removal of O_2^- . Similarly, KNO_3 also affords significant radioprotection against oxidic damage. However, for a given concentration, KMnO_4 affords significantly more protection than KNO_3 . These results possibly suggest that radioprotection against oxygen-dependent damage by KMnO_4 and KNO_3 primarily arises from the overall reduction in O_2^- . There is, however, a difference between the actions of KMnO_4 and KNO_3 . It is noted that the $t\text{-BuOH}$ has no effect on the magnitude of radioprotection afforded by KMnO_4 , whereas it significantly enhances the level of radioprotection by KNO_3 . The yield of H_2O_2 is also concomitantly reduced when $t\text{-BuOH}$ is present together with KNO_3 . An important aspect of radioprotection by chemicals which scavenge e_{aq}^- is that there is always an optimal concentration for the maximal radioprotection against oxidic damage. These observations possibly mean that the

secondary radical entities formed by the reaction of chemicals with e_{aq}^- could also be damaging, but to lesser extent than O_2^- . What seems a reasonable picture is that the potency of damaging action is $O_2^- < NO_2^- > \dot{MnO}_2$.

Caffeine which reacts with both $\cdot OH$ and e_{aq}^- exerts significant radioprotection against oxidic damage. The kC for e_{aq}^- increases from $1.5 \times 10^4 S^{-1}$ at $1 \times 10^{-6} M$ to $7.5 \times 10^7 S^{-1}$ at $5 \times 10^{-3} M$ caffeine. The kC of O_2 for e_{aq}^- is more or less constant at $2.1 \times 10^7 S^{-1}$. In the afore said situation, the H_2O_2 yield does not discernibly vary from that obtained in spores irradiated in O_2 without caffeine. The $t\text{-BuOH}$ ($5 \times 10^{-2} M$) when mixed with caffeine ($5 \times 10^{-3} M$ and $1 \times 10^{-6} M$) results in about 10% greater protection than that without the $t\text{-BuOH}$. These data are largely in accordance with the view that radioprotection by caffeine arises from its competition with O_2 for e_{aq}^- and the consequent reduction in the yield of O_2^- . This, however, does not mean that a small degree of protection would not possibly result from removal of $\cdot OH$ by caffeine. Catalase also reacts with both e_{aq}^- and $\cdot OH$ and it affords significant radioprotection at 1 unit/ml and 5 units/ml. Here, $t\text{-BuOH}$ adds roughly 10% more protection to that exerted by catalase at 5 units. It also exerts about 10% protection in combination with 10 units of catalase, which by itself does not give any protection. However, $t\text{-BuOH}$ has no such effect on the maximum protection elicited by catalase at 1 unit. At higher units, catalase is expected to react well with e_{aq}^- and cause a transient build-up of $\cdot OH$ and H_2O_2 . This explains why $t\text{-BuOH}$ affords about 10% extra protection. In support of this contention, attention is drawn to the fact that $t\text{-BuOH}$ also reduces the H_2O_2 yields. Notwithstanding certain minor incongruities, it is reasonable to assume that protection by catalase involves the removal of O_2^- . This assumption is supported by the concentration-dependent radioprotection by catalase. It is further indicated that the secondary radical entities of catalase beyond a threshold concentration begin to damage the vital target molecules of the cells and account for reduced radioprotection.

In combination with the other additives, caffeine determines the mode and magnitude of modification of radiation damage. When catalase is combined with $t\text{-BuOH}$ ($5 \times 10^{-2} M$), ascorbic acid ($5 \times 10^{-3} M$) or

KMnO_4 ($5 \times 10^{-3}\text{M}$), there is little change in the sensitivity of spores. These data, considered together with H_2O_2 yields, suggest that under oxygenated conditions there are situations in which protection is associated with a build-up of H_2O_2 . However, in reality the situation is possibly quite complex.

Radiosensitization of anoxic component of damage by various additives has been examined in terms of "electron sequestration" model of Powers (1972). The *t*-BuOH does not exert any effect on the anoxic component of radiation damage. Sodium azide, another $\cdot\text{OH}$ -scavenger, exerts a significant radiosensitization in N_2 . This observation does not fit into any of the existing models of radiosensitization. Secondary radical entities resulting from the reaction of NaN_3 with e_{aq}^- have been considered as one of the possible damaging-species in N_2 . The sensitization of the anoxic component by KMnO_4 also can be explained as due to the damaging action of $\dot{\text{MnO}}_2$, since *t*-BuOH does not have any effect on the sensitization caused by KMnO_4 . MnO_2 is proposed as the possible secondary radical entity.

Anoxic radiosensitization by KNO_3 follows the typical "electron sequestration" model. KNO_3 present during irradiation increases the yield of $\cdot\text{OH}$ and H_2O_2 ; *t*-BuOH desensitizes this anoxic potentiation to a significant extent. The H_2O_2 yield is also appreciably decreased.

Caffeine significantly potentiates the anoxic component of radiation damage and this action is correlated with the build-up of H_2O_2 as demonstrated by Kesavan and Powers (1985). *t*-BuOH ($5 \times 10^{-2}\text{M}$) does not alter the k -values when it is mixed with caffeine at different concentrations; nor does it alter the yields of H_2O_2 .

When the influence of a mixture of equimolar concentrations of KMnO_4 and caffeine on the anoxic damage is examined, the k is approximately a value between the k (KMnO_4) and k (caffeine) of the spores irradiated in N_2 . One would expect that the equimolar mixture of KMnO_4 + caffeine should result in a greater increase in the sensitivity (k) far beyond the value by either of these alone. The reason for this is that KMnO_4 and caffeine together would remove more electrons, and thus lead to larger concentrations of $\cdot\text{OH}$ -radicals and

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H_2O_2 . This again is *not* the case. These considerations, therefore, implicate secondary radical entities such as $\dot{MnO}_2$ and $\dot{caf}$. etc., in the mode and magnitude of modification of radiation damage.

These data emphasize that direct correlation between kC calculations and the spore radiosensitivity (k) following the presence of different additives during irradiation in N_2 and O_2 is not *always* observed. The role of secondary and tertiary radical reaction products would have to be envisaged. The immediate future goals of research in this field ought to take into account the role of secondary radical entities.

Changes in some Neurotransmitter Pathways in the Hypothalamus of ageing rat brain and the effects of some Drugs used in Geriatric Therapy

Marianna Irri

Sup : Prof. Rameshwar Singh

Ageing of hypothalamus is of great significance since it is an important component of both limbic system and neuroendocrine system and also is an organ of central control of autonomic nervous system. Thus, it is a structural as well as a functional focal point at which several neurotransmitters are involved in controlling and regulating the endocrine system on one hand the autonomic nervous system on the other. Several gerontologists have assigned a key role to the hypothalamus in the regulation of ageing process and thought it as a probable site where an "ageing clock" may be located (Everitte & Delbridge 1976).

Alterations in the neurotransmitter status of hypothalamus may reflect adequately the changes in physiological functions viz. homeostatic regulation, endocrine functions and reproductive system (Samorajski, 1977 : Ingram *et al.*, 1983). Specific functional alterations may result from excess, deficit or imbalance of several neurotransmitters and also from the loss of cell number in the brain.

In the present work, therefore, enzymes of the three neurotransmitter systems viz. Cholinergic, GABAergic, Catecholaminergic have been studied in the hypothalamus of 3, 12 and 24 month aged rats with a view to elucidate the nature of age-related alterations. In most of the research reports to date, the age-related changes in the neurotransmitter enzyme activities have been measured in whole homogenates of the brain tissues. It is known that neurotransmitter components are highly compartmentalised and thus different components may be localised at distinct subcellular and cellular sites. In whole homogenates, the sub-fractional variations could be masked and thus some changes may

remain undetected (Victorica *et al.*, 1984). In the present work, biochemical changes have been, therefore, determined in subcellular fractions also in order to determine subcellular sites of ageing changes in hypothalamus. Besides age-related changes in various neurotransmitter enzyme activities in hypothalamic subcellular fractions, age-related changes in cerebral hemispheres (CH) and cerebellum (CB) have also been determined to assess the possible regional differences in ageing.

In the present work, two cholinergic enzymes viz. Acetylcholinesterase (AChT), and Acetylcholinesterase (AChE) have been studied. The former one is anabolic and the later one is catabolic. Likewise, for studying GABAergic system, two enzymes viz. Glutamic acid decarboxylase (GAD) which catalyses the synthesis of GABA and gamma aminobutyric acid transaminase (GABA-T) which degrades the GABA neurotransmitter have been studied. In case of catecholaminergic system, tyrosine hydroxylase (TH) activity has been determined which is the first and important enzyme and catalyses the first step of DOPA formation from which all other catecholamines viz. dopamine, noreadrenaline and adrenaline are formed.

It would not be out of place to briefly mention about the age-related changes in various neurotransmitters in the hypothalamus and the endocrine system they influence. It has been reported that AChT, AChE, GAD and TH and GABA-T decrease with age (McGeer *et al.*, 1971, McGeer and McGeer 1975; Cote and Kremzner, 1975; Marianne *et al.*, 1984). The cholinergic and GABAergic systems have been found to influence the hypothalamic catecholamine metabolism (Florindo and Martin, 1975; Nigro Vilar *et al.*, 1980; Haycock and Waymire, 1982 and Vincent *et al.*, 1982). It has also been found that acetylcholine stimulates the secretion of corticotropin releasing factor from the rat hypothalamic incubates in vitro (Jones *et al.*, 1976; Reigle, 1983), and also that GABA elevates prolactin, LHRH and dopamine levels in median eminence (Nigrovilar *et al.*, 1980).

Results obtained in the present work regarding the regional age-related changes showed that the two neurotransmitter synthetic enzymes; AChT and GAD were higher in cerebral hemispheres than in hypothalamus indicating thereby that cerebral hemispheres had higher cholinergic and GABAergic neurotransmitter activity than that the hypothalamus. The tyrosine hydroxylase activity was highest in hypothalamus than the other two brain regions cerebral hemispheres and cerebellum. This indicates that hypothalamus is rich in catecholaminergic neurotransmitter system. However, cerebellum showed lowest activities of all the

five enzymes studied in this work. The relative distribution of neurotransmitter enzymes in various subcellular fractions showed that AChT, GAD and TH were preponderantly distributed in synaptosomal fraction and the acetylcholinesterase in the S_1 fraction. Whereas GABA-T activity was found to be highest in the mitochondrial fraction. These results are consistent with the previous reports.

Age-related changes in Neurotransmitter Enzymes

The results regarding the age-related alterations in neurotransmitter enzyme activities studied in this work showed that tyrosine hydroxylase activity initially increased from 3 month to 12 month but later on it showed significant decrease at 24 month of age. The age-related changes of tyrosine hydroxylase activity were greater in hypothalamus than in the other two regions. Acetylcholinesterase (AChT) and Acetylcholinesterase (AChE) were found to decrease with age in hypothalamus and also in the other two regions i.e. CH & CB. The hypothalamus has less cholinergic enzyme activities than cerebral hemispheres and but more than that of cerebellum, however the age-related decrease in the enzyme activities in hypothalamus and cerebral hemispheres found to be the almost equal. This is indicative of a relatively greater role besides cerebral hemispheres, the hypothalamus is likely to play in ageing. Regarding age changes in GABA system of hypothalamus, the present data showed that GAD activity significantly increase with age whereas GABA-T was found to remain unchanged in hypothalamus. This result would appear to show that excitability of hypothalamus decreases with age since increase in GAD activity together with no change in GABA-T activity is an indication of decrease in excitability i.e., enhanced inhibition resulting from increased synthesis of GABA (Tapia *et al.*, 1975). Though this observation made in the present work is consistent with earlier report which indicated decrease in electrical excitability in some areas of the ageing rat hypothalamus (Frolkis *et al.*, 1972), the present biochemical observations are not in agreement with McGeer and McGeer (1975) who reported age-related decrease in GAD activity with age. Some workers, however, have reported that GAD remains unchanged with age in some parts of the brain.

Notwithstanding minor differences, the cerebral hemispheres and cerebellum also showed more or less the same pattern of age-related changes in enzyme activities, except that an age-related decrease in GABA-T activity was observed in cerebral hemispheres and cerebellum which would appear to be consistent with previous reports (Fonda *et al.*, 1973).

Effect of anti-ageing drugs

Pharmacological intervention to correct deficits that arises during ageing is another important aspect of gerontological research. Thus in the present work besides studying the age-related changes in the neurotransmitter enzymes, the responses of these enzymatic systems to some antiageing drugs and the influence of age on the response to the drugs have also been assessed. In the present study, the effect of three drugs viz. dimethylaminoethanol (DMAE), centrophenoxine (CPZ) and Vincamine have been studied. DMAE has been found to occur naturally in body fluids and is a precursor of choline which is used for the formation of membrane forming phosphatidylcholine (Pfeffer *et al.*, 1957), and also of the neurotransmitter acetylcholine (Zahniser *et al.*, 1977). This drug has been found to increase the life span in mice (Hochschild, 1973a) and is sometimes beneficially used in a number of clinical situations viz. neuronal dysfunction, memory deficits, Schizophrenia etc.

Centrophenoxide is a drug synthesized from the combination of 2-dimethylaminoethanol (DMAE) and p-chlorophenoxyacetic acid. The effects of both the drugs viz. centrophenoxine and DMAE have been studied in this work since it is generally believed that pharmacological effects of centrophenoxine are actually those of DMAE. Centrophenoxine also have been found to increase life span in mice (Hochschild, 1973b), reduce the age pigment "lipofuscin" (Hasan *et al.*, 1974 a & b, Patro and Sharma, 1984) increase the rates of total and mRNA synthesis in old rats (Zs-Nagy and Semsei, 1984).

Vincamine is another antiageing drug. It has been found to increase cerebral blood flow in old age (Hagstadius *et al.*, 1984) and increase the discharge rates of locus coeruleus neurons (Olpe and Steinmann, 1981) which are noradrenergic.

The data obtained in the present work broadly showed that DMAE elevated the activity of both the cholinergic enzymes, i.e. AChT, and AChE also of tyrosine hydroxylase (TH) activity in hypothalamus and the other two brain regions. In general, the older rats were found to be more responsive to the drug treatment. In case of GABAergic system, the antiageing effects of DMAE were apparent as the drug significantly inhibited that GAD activity which was found to increase with age. In hypothalamus the GABA-T activity was inhibited by the drug, whereas in cerebral hemispheres and cerebellum the activity was increased. This shows that DMAE has different effects on GABA-T in different regions.

Centrophenoxine was found to increase the tyrosine hydroxylase activity in hypothalamus and also in the other two brain regions. This effect is similar to the effect of DMAE. Centrophenoxide also inhibited the GAD activity. This shows that DMAE and centrophenoxine both appear to augment excitability of the ageing hypothalamus and as well as the other two brain regions. In the present work centrophenoxine was found to inhibit the AChT activity unlike DMAE. But in the case of AChE activity, centrophenoxine stimulated the activity like DMAE. Thus centrophenoxine differs from DMAE in its effects on ageing brain largely with respect to AChT. Further work will be required to find out the reasons for the differences for it is mostly believed that centrophenoxine effects are those of DMAE.

Vincamine also found to increase the activity of tyrosine hydroxylase in hypothalamus of aged rats. This shows that Vincamine exerts a stimulatory influence on catecholaminergic neurotransmitter.

Electroencephalographic (EEG) Observations :

Bioelectric activity is highly sensitive manifestation of the brain functions. While electroencephalographic activity represents a general energy state of the brain structure, evoked potentials are indicative of the processing of incoming sensory information. During ageing there occurs a slowing of electrical activity. Changes in the spontaneous electrical activity during ageing appears to be a consequence of a number of events such as reduced conduction velocity, increased synaptic delay which could be due to altered neurotransmitter functions etc. Thus, to understand the relationship between neurotransmitter changes and the electrical activity changes of the hypothalamus, the EEG activity has been recorded in the three age groups (3, 12 and 24 months). Further, the effects of antiageing drugs viz. Dimethylaminoethanol and Centrophenoxine and Vincamine have been also examined on the EEG activity of hypothalamus.

The hypothalamic EEG traces obtained from normal ageing rats of 3, 12 and 24 months age groups showed that the electrical activity decreased with age : for example, at 24 month age the electrical activity consisted of high amplitude and low frequency whereas at 3 month age group the activity was of low amplitude and high frequency.

Dimethylaminoethanol was found to increase the hypothalamic electrical activity and the increase seemed to be proportional to the duration of treatment. However, the rats treated for 21 days even

showed occasional hyper-activity discharges resembling epileptiform activity episodes. Centrophenoxine appeared to decrease the electrical activity in rats of 3 month age group. However, in 12 and 24 month aged rats the centrophenoxine produced increase in the electrical activity. Vincamine treatment in 24 month aged rats for 7, 14 and 21 days treatment increased both the amplitude and the frequency of electrical activity. These results are consistent with the earlier report that vincamine increases the rate of firing discharges in electrical activity from locus coeruleus neurons (Olpe & Steinmann 1981) which are noradrenergic. In our observations also vincamine produced an increase in tyrosine hydroxylase activity in hypothalamus.

From the observations made on the effect of the three drugs on the electrical activity, it appears that the three drugs augment the hypothalamic functions.

Materials and Methods

In this study the female albino rats of Holtzman strain of different age groups were used. For biochemical observations after 7, 14, 21 days of treatment with DMAE, centrophenoxine and vincamine, the rats were killed by cervical dislocation and the hypothalamus, cerebral hemispheres and cerebellum were dissected out in ice cold room (Temp. 4°C). The subcellular fractions viz. synaptosomal and mitochondrial fractions were obtained by differential centrifugation by using discontinuous Ficoll-Sucrose gradient. Whereas S_1 fraction is almost equivalent to the whole homogenate. The enzyme activities were measured according to the standard spectrophotometric and radiometric methods. Most of the chemicals were obtained from Sigma Chemical Co., U.S.A. and the radio-isotopes from BARC, Bombay, India.

For electrophysiological studies the animals of different age groups were divided into control and experimental ones from each age group. The bipolar electrodes (Tungston) are implanted in the hypothalamus according to standard method at standard stereotaxic co-ordinates. After the implantation, the rats were allowed enough time to recover for surgery and due care was taken to avoid any infection. The rats were made accustomed to the EEG recording setup before obtaining electrical activity from untreated and treated rats. After the treatment with DMAE, centrophenoxine and vincamine for 7, 14 and 21 days the EEG records were obtained, and these were compared with those seen in untreated rats.

Studies on Nucleotide Binding to CF_1 and its Relation to Photophosphorylation

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Sup: Prof. G.S. Singhal

1. General

The biological process of the conversion of solar energy that produces useful chemical products involves the trapping of light energy in the visible and near infrared portions of the spectrum. The primary event in this process is the absorption of light energy by the light-harvesting pigment-protein complexes and the transfer of this energy to the reaction centers. The charge separation at the reaction centers gives rise to the formation of the oxidized and reduced chemical species. Subsequently, the transfer of electrons and protons leads to formation of NADPH and ATP which drive the carbon metabolism. The trapping of light energy, the transfer of electron and the synthesis of ATP are mediated by the specialized protein complexes which are arranged asymmetrically in the photosynthetic membranes.

The electron transport process in the energy transducing membranes e.g. photosynthetic membranes, is vectorial in nature. This arises because of asymmetric distribution of electron transport complexes in the membrane. The electron transport generates an electrochemical gradient of H^+ -ions presumably across the membrane. The electrochemical gradient of H^+ -ions is the main driving force for the synthesis of ATP from ADP and P_i . The synthesis of ATP is catalysed by a membrane bound enzyme called coupling factor e.g. CF_0 - CF_1 complex. The transduction of light energy into the synthesis of ATP is called photophosphorylation and the exact mechanism of this process is still not known completely.

Different hypotheses have been proposed for understanding the mechanism of ATP synthesis in energy transducing membranes. The

directly coupled chemiosmotic mechanism involves the direct participation of H^+ -ions in the synthesis of ATP. The conformationally coupled hypothesis excludes the direct participation of H^+ -ions in ATP synthesis. In the latter model the proton pump of $(C)F_0$ and the hydrolytic site on $(C)F_1$ are shown as separate entities and the changes in the affinities of nucleotide binding are done through the transmission of energy in the form of conformational changes in the protein. The intra-membrane concept indicates that there are specialized pathways of proton translocation, the so-called protonic network, from the site of its generation to the site of its consumption.

The electrochemical gradient of H^+ -ions, generated either due to light-driven electron transport or artificially imposed ΔpH through acid-base transition or through diffusion potential of K^+ -ions across the thylakoid membrane, has been shown to induce considerable conformational rearrangements in CF_1 . The energy dependent conformational changes in CF_1 lead to the release of tightly bound adenine nucleotides e.g. ADP, from CF_1 . The energy dependent release of ADP causes activation of CF_1 -ATPase either for ATP synthesis or for ATP hydrolysis. This suggests that the active form of CF_1 is the one which does not contain any bound nucleotide. The fact that one ATPase molecule can exchange only one adenine nucleotide, the release of one adenine nucleotide indicates the activation of one ATPase. The fraction (ϕ) of activated ATPase is given by the magnitude of the fast phase of the release of adenine nucleotides.

CF_0 - CF_1 complex consists of 8 subunits, while five subunits designated as α , β , γ , δ and ϵ with a molecular weight 59, 56, 37, 17.5 and 13 kD respectively belong to CF_1 , the membrane part of this complex, CF_0 , consists of subunits designated as I, II, and III with a molecular weight of 15, 12.5 and 8 kD respectively. The CF_0 part of the CF_0 - CF_1 complex forms a proton channel across the membrane. The catalytic site of the ATP synthesis or hydrolysis is located on CF_1 .

The chemical modification of the functional groups of amino acids in a given enzyme is one of the most important tools for understanding the structural-functional relationship in the enzyme molecule as well as for the determination of the active site of the enzyme. Using this approach several researchers in the field of bioenergetics of photosynthesis have determined the role of $-SH$, $-COOH$, $-\epsilon-NH_2$, phenolic $-OH$ of tyrosine etc. groups, in the functioning of CF_1 .

In our studies carried out during the last few years, we have utilized the technique of the chemical modification of functional groups

of enzymes to understand the relationship between the energy dependent release of ADP and photophosphorylation. We have carried out the following chemical modifications of functional groups of CF_1 *in situ* and have studied their effects on both the energy dependent release of ADP and photophosphorylation carried out under identical experimental conditions.

1. Modification of ϵNH_2 group of lysine by fluorescamine.
2. Modification of phenolic—OH group of tyrosine by NBD—Cl.
3. Modification of —COOH group by DCCD.
4. Modification of —SH group by NEM and IBZ as well as the reversal effect of DTT.

Since both the above mentioned activities of CF_1 are controlled by μH^+ , we were interested in elucidating the effects of the uncouplers and ionophores which decrease the μH^+ , on both the energy dependent release of ADP and photophosphorylation. The energy transfer inhibitors are known to inhibit ATP synthesis without affecting μH^+ . We have, therefore, attempted to find out whether phloridzin, a well known energy transfer inhibitor, influences both the processes i.e. energy dependent release of ADP and photophosphorylation.

II. Involvement of Functional Groups of Amino Acid Residues of CF_1 in Energy Dependent Release of ADP and Photophosphorylation

A. $\epsilon-NH_2$ Group of Lysine

Our studies on the modification of $\epsilon-NH_2$ group of lysine residues in CF_1 with fluorescamine suggest that

- (i) $\epsilon-NH_2$ group of lysine residues of CF_1 normally exposed in dark play a conformational role in regulating both the energy dependent release of ADP and photophosphorylation.
- (ii) $\epsilon-NH_2$ group of lysine molecules of CF_1 exposed during the energy dependent conformational changes in CF_1 are involved at the catalytic site of ATP synthesis.
- (iii) Changes in protonation-deprotonation profile of ionizable groups in CF_1 .

B. Phenolic Hydroxyl Group of Tyrosine

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Our data on NBD-Cl modification of tyrosine residues in CF_1 indicate that

- (i) tyrosine residues are involved at the active site of CF_1 -ATPase.
- (ii) the active site of ATP synthesis and adenine nucleotide binding site on CF_1 are present at a different location on CF_1 . However, these sites interact with each other.

C. -COOH Group

Our studies on the effect of treatment of salt-washed thylakoid membranes with DCCD indicate that

- (i) -COOH group of acidic amino acid residues of CF_1 are present at the catalytic site of ATP synthesis.
- (ii) The active site of ATP synthesis and the adenine nucleotide binding site on CF_1 are physically separate. These sites interact with each other.

D. -SH Group

The data on thiol modulation of -SH group with NEM, IBZ and DTT show that

- (i) Modification of salt-washed thylakoid membranes with NEM in dark leads to energy transfer inhibition which could not be reversed by DTT.
- (ii) Oxidation of -SH group of γ -subunit of CF_1 , exposed during the high energy state of chloroplasts, with IBZ results in decrease in the energy dependent release of ADP as well as photophosphorylation.
- (iii) DTT is capable of reversing the inhibitory effect of IBZ.
- (iv) Thiol modulation of -SH group alters $\Delta\mu_H^+$ which is required for activation of CF_1 as well as for the synthesis of ATP.

III. Effect of Energy Transfer Inhibitors, Uncouplers and Ionophores on Energy Dependent Release of ADP and Photophosphorylation

Our studies with phloridzin show that the energy transfer inhibitor do not affect significantly the energy dependent release of ADP. How-

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ever, the photophosphorylation activity is blocked. This suggests that the energy transfer inhibitors affect the terminal process of ATP synthesis but do not affect the energy dependent activation of CF_0-CF_1 complex.

The uncouplers and ionophores which are known to decrease $\Delta\mu_{H^+}$ by decreasing ΔpH or $\Delta\psi$ respectively also lead to inhibition of both the energy dependent release of ADP and photophosphorylation activities in chloroplasts. This observation shows that $\Delta\mu_{H^+}$ is the driving force for both the activation of CF_1 and for the catalytic synthesis of ATP by CF_1 .

In brief we would like to conclude that

- (i) Active site of ATP synthesis and the binding site for adenine nucleotide are present at different locations on CF_1 although they interact with each other.
- (ii) (a) $\epsilon-NH_2$ group of lysine residues which are exposed during the high energy state, (b) $-COOH$ group and (c) phenolic $-OH$ group of tyrosine are involved at the active site of ATP synthesis.
- (iii) Thiol modulation of $-SH$ group of CF_1 regulates both the activation and the catalytic functions of CF_1 .
- (iv) $\Delta\mu_{H^+}$ is the driving force for the activation of CF_1 as well as for the synthesis of ATP.

Russian Central Asia and Kashmir : A Study in the context of Anglo Russian Rivalry over Central Asia 1850-1950

K. Warikoo

Sup : Prof. Devendra Kaushik

The 'great game' has been the theme of several studies, most of which assign a central place to Afghanistan or Central Asia or both. The present study aims at breaking a new ground by making a critical evaluation of the relations between Central Asia and Kashmir against the backdrop of the imperialist strategies towards the north and north-western frontiers of India. Being a native of Kashmir, the researcher has endeavoured to assess the issues involved in their local context as well. It is limited to a time-frame which stretches from the mid-nineteenth century, when the Anglo-Russian rivalry gained its intensity, upto the year 1920 when the Soviet power was firmly established over the former Central Asian Khanates of Khiva and Bukhara.

The work adopts a historico-analytical approach and is mainly based on primary sources available in the National Archives of India, Jammu and Kashmir Government Archives, contemporary travel accounts, diaries and local histories. It also draws upon the works of leading Soviet and pre-Soviet writers and scholars of the U.S.S.R. in order to cross-check or corroborate the information derived from the British Indian sources. The author has also consulted the microfilms of Russian archival records available in the National Archives of India.

The first chapter deals with the political contacts between Central Asia and Kashmir including its frontier dependency of Munza during the nineteenth century. The despatch of Agha Mehdi Rafailov by the Russian Foreign Ministry to Ladakh and Kashmir twice in 1808 and 1820 sheds important light on the keen Russian desire to develop direct trade with Kashmir and Punjab, particularly after the enforce-

ment of continental blockade by Napoleon. Round about the same time the British officer named Moorcroft was exploring Central Asia. That both these agents had also been commissioned to acquire shawl-wool goats for rearing in Siberia and Britain, indicates the convergence of Anglo-Russian commercial activities in the region from the two opposite directions. It would not be correct to infer any aggressive design of Russia from the despatch of Agha Mehdi's missions. The intervening Central Asian Khanates and also the Chinese possessions of Eastern Turkestan stood as formidable barrier to any possible Russian move towards Kashmir.

As a sequel to the growing Russian threat the Kokandi ruler sent envoys to India for seeking British military support. During their travels through Jammu and Kashmir, Maharaja Gulab Singh took pains to restrict the British activity in his frontier territory of Ladakh, in order to maintain his high independent political stock in Central Asia and to prevent its erosion in the face of British paramountcy in India.

After the mid-nineteenth century when the Anglo-Russian rivalry gained its intensity, Britain became restive to use Kashmir as a listening post for monitoring the Russian movements in Central Asia. With this end in view, sustained British pressure was brought upon Maharaja Gulab Singh and his successor Ranbir Singh to secure a foot-hold in this frontier outpost. The British could not bear that Kashmir being their subsidiary ally, should prove to be a bottleneck in their policy of extending commercial and thereby political influence in Central Asia. However, the growing British interference in Kashmir made the Dogra rulers bitter.

When the Russians occupied Tashkent in 1865, Maharaja Ranbir Singh was the first Indian prince to send secret emissaries to convey his greetings to the Russian General Chernisev on his success. He also extended a hand of friendship to the Russians. Judging from the conditions existing in India during the period of British paramountcy Ranbir Singh's attempt to move away from the British stranglehold was daring and unique when compared to the meek servility displayed by other Indian princes. The first such mission comprising Abdul Rahman Khan and Sarfaraz Khan arrived in Tashkent in November 1865. In 1869 another trusted emissary, Baba Karam Prakash, was sent on a secret mission to Central Asia. The Kashmir ruler offered his full support to the Russians in the event of their advance on India but demanded cession of Lahore territory in return. The Russians are

reported to have informed Ranbir Singh through Karam Prakash that they would not make any move until the rulers of Nepal, Gwalior and Kabul offered similar support. That the Kashmir ruler later employed Karam Prakash on secret missions to Nepal and Gwalior and also maintained secret communications with the Amir of Kabul, shows that he stood firm by his offer. It was during the III crisis when Russia and China were at the brink of war, that Ranbir Singh reiterated his support to the Russians if they succeeded in taking Kashgar from China, thus coming close to the borders of Kashmir. Ranbir Singh maintained direct and regular contacts with the Russian authorities in Central Asia throughout his reign. Ignoring the British presence in Kashmir, General Kaufmann, the Russian Governor General of Turkestan, sought in 1877 Ranbir Singh's help in recovering the treasure of the dethroned chief of Kashgar, Beg Kuli Beg, who had taken refuge in Russian Central Asia. Kaufmann's successor General Rosenbach also maintained this liaison and was prompt in sending his condolences to Maharaja Pratap Singh on hearing the news of the death of Ranbir Singh in 1885.

While the Russians reciprocated Ranbir Singh's friendly sentiments, they steered clear of any active involvement in the internal affairs of British India which could have led them to a direct conflict with the British. The Russian response to Kashmir overtures can be compared to the British response to similar overtures from the Khans of Khokand and Bukhara. Both powers, though competing with each other in this region, did not want to run the risk of a direct military confrontation.

If Ranbir Singh's attempt to forge diplomatic links with the Russians in Central Asia did not bear political fruits, it helped in gaining the Russian consent to the free import of Kashmir shawls into the Russian territory. The Russian offer of protection to Kashmir merchants stood in marked contrast to their policy of curbing imports from British India. Tsarist Russia also reciprocated by sending some envoys in disguise to meet the Kashmir ruler. Pachino, an officer in the Russian Foreign Service, made two attempts in 1870s to meet Maharaja Ranbir Singh in Kashmir.

Hunza's coterminous border with the Pamirs and the cultural affinity of its Ismaili inhabitants with their co-religionists residing in Wakhan, Russian Pamirs and Sarikol area were factors that facilitated the percolation of Russian influence in this frontier dependency of Kashmir. But the first direct Russian contact with Hunza was forged in 1888 when Safdar Ali, the Chief of Hunza, hosted a reception for the

visiting Russian explorer, Captain Crombchevaky and both exchanged presents. Safdar Ali was so much impressed by Russian power that he sent two emissaries to Russian Turkestan in 1891 to seek Russian support against the feared British attack. Russians received the envoys well and advised Safdar Ali to play it cool with the British till Russia consolidated her position in the Pamirs. While moving forward in the Pamirs, Russians did not get involved in the military confrontation between the British and Safdar Ali in late 1891 following which the Hunza Chieftain fled to Chinese Turkestan.

The reconnaissance missions by British officers in and around the Pamirs attracted Russian attention. In fact both Grombchevaky and Younghusband were proceeding to reconnoiter the Pamirs area in 1888 from two opposite directions. Their encounter at Bozai Gumbaz was a clear pointer to the convergence of the Anglo-Russian movements in the Pamirs. This resulted in the extension by military force of British control over Munza in 1891 and a simultaneous assumption by Russia of control over a greater part of the Pamirs. The British occupation of Hunza made the Russians think seriously about the formal delimitation of frontiers at the Pamirs. This resulted in the conclusion of the Pamirs Boundary Agreement in 1895.

The second chapter discusses Kashmir's trade relations with Russian Central Asia. Due to its geographical location, Kashmir acted as a transit emporium for Indian trade with Central Asia. The Tsarist policy of curbing the import of British Indian goods into Central Asia caused a great setback to this traditional trade. But still Kashmir shawls, Indian tea, muslims, brocades, spices, medicines, Indigo and coral filtered into Central Asia, as these goods were strongly liked by Central Asians. The Central Asian exports to India via Kashmir were comparatively fewer and these comprised mainly gold coins, rubles and coarse cotton goods. Kashmir's trade with Russian Central Asia was thus insignificant in quantitative terms when compared to that passing through Bukhara-Afghanistan and Punjab or the Bombay-Batum-Caspian sea route.

Since this trade was mainly routed through Chinese Turkestan, the state of diplomatic relations existing between the Chinese in Sinkiang and the Russians in Central Asia conditioned the extent and pattern of Kashmir's commercial relations with Russian Central Asia. Thus when the relations between Russia and China became smooth after the conclusion of St. Peteraburgha Treaty in 1881, Indian exports of coral to Russian Central Asia through Kashmir and Kashgar increased manifold.

The disturbed conditions in Central Asia in the post-Bolshavik revolution period, affected adversely the movement of trade between Russian Central Asia and Kashmir, which was already irregular and insignificant. With the state take-over of the private trade in Soviet Russia little scope was left for Indian trade with Soviet Central Asia which was solely operated through the medium of private traders. The restrictions imposed by the British on export of essential commodities like cloth, leather etc. from India to Central Asia during the height of Anglo-Soviet tensions also inhibited the development of this trade.

The cultural exchanges between Central Asia and Kashmir form the theme of the third chapter. Geographical proximity and cultural affinity in terms of religion, customs, dress, food and drinking habits provided a strong base for the continuation of the socio-cultural links between peoples of Central Asia and Kashmir.

Kashmir shawls continued to be a favourite apparel of the Central Asian and Russian alite. The Persian and Arabic literary texts copied by Kashmiri calligraphists occupied an honoured position in the personal libraries of the Central Asian nobility. Kashmiri families bearing surnames like *Akhood' Baq*, *Kashgari*, *Turki*, *Bukhari*, *Nakshbandi* etc. are a living example of the cultural interaction that took place as a result of immigration of Central Asian refugees and traders into Kashmir in the olden times. During the nineteenth century, the Nakshbandi family of Kashmir came in handy both to the Dogra rulers and the British Indian authorities for obtaining political information about Central Asian Khanates. The Nakshbandis still commanded a large following in Turkestan.

Kashmir was a special attraction for the Central Asians who braved all hazards to travel by a circuitous and mountainous overland route to Bombay for making a Hajj Pilgrimage. This was mainly due to Kashmir being a cool hill resort free from political turmoil and banditry. The same factors were responsible for the desire of numerous Central Asian princes to seek refuge in Kashmir after they were deprived of authority in their native places.

Whereas both Britain and Russia imposed stringent curbs on the free movement of the people from India into Central Asia and vice versa, the two powers found it expedient to use the Indians including Kashmiris and Central Asians as pawns in their 'great game'. The success of these native agents in collecting intelligence for use of their respective European masters was due to the existence of traditional

social relations between the two regions. Thus they could easily escape detection while moving around and conversing freely with the local people.

It was during the rule of Maharaja Ranbir Singh of Kashmir that relations with Central Asia were particularly strengthened. His emissaries and agents used to stay in Russian Central Asia for years together learning Russian and Uzbek languages and even conducting business. One such agent, Mehta Sher Singh prepared a report of his experiences. Ranbir Singh encouraged some of his trusted men to learn Russian language to facilitate his communication with the Russians in Central Asia. Russian officers posted in Central Asia also evinced keen interest in the life and culture of Kashmir. Pachino took pains to collect tales about Kashmir by interviewing numerous Kashmiri visitors in Central Asia. He published the same in Russian language.

Despite restrictions on trade and travel imposed by the British after the establishment of Soviet power in Central Asia, some anti-Bolshevik erstwhile Russian officers were allowed to come to India via Pamira—Gilgit route. Besides, some Bukheran refugees including the representatives of the ex-Amir of Bukhara entered India via Chitral. The Bukhara Amir was hi to seek efkrnemsleefuge in Kashmir, but he could not make his way upto Gilgit before the arrival of Red Army at the Pamirs. The October revolution, however, did not result in any large scale migration of Central Asians into India via Chitral, Gilgit or Leh routes. However, some tribal chiefs of Russian Pamirs who sought British protection against the Bolsheviks under the advice of their spiritual master, the Agha-Khan, were an exception. This stands in sharp contrast with the mass migration of Muslim Uighur and Tungan refugees to Kashmir right from 1937 onwards due to political disturbances in Chinese Turkestan. But after the 1930s some Central Asian and Russian refugees though their number was not so large, did come to India via Afghanistan-Chitral, Pamirs—Gilgit and Kashgar-Leh routes. They were forced to migrate largely because of the hardships caused during the collectivisation campaign in Soviet Central Asia.

From the side of Kashmir there was no such emigration to Central Asia as was the case in North West Frontier Province and Punjab in the wake of *Hijrat* movement. However, a Kashmiri, Mir Abdul Majid, who was working in Lahore emigrated to Soviet Central Asia alongwith a group of Indian revolutionaries in 1920.

The Anglo-Russian rivalry, which put many restraints on the conduct of normal relations between Central Asia and Kashmir is dealt

with in the fourth chapter in the context of British policy towards Kashmir. The existence of such traditional relations did have a cumulative impact on the future shaping of the Anglo-Russian strategies to promote their imperialist designs in this region. Thus Maharaja Ranbir Singh's flirtations with the Russians in Central Asia only activated the British determination to enforce their paramountcy in Kashmir through the establishment of a full-fledged Residency to supervise the internal administration and conduct the external relations of the State. It was usual for both Britain and Russia to despatch native agents to Central Asia and India including Kashmir respectively for obtaining information of commercial, political or military value. In a bid to prevent the entry of such agents, each power imposed stringent curbs on the overland journey of strangers from Central Asia to India and vice versa.

The British realised the strategic importance of Kashmir and its frontier territories in Ladakh, Gilgit, Munza and Chitral as a convenient listening post to monitor Russian movements in Chitral Asia and also as a spring-board for their forward movement. Since the native agents could not collect the vital political intelligence to meet the British requirements and as the British officers were too scared to travel in Central Asia after the murder of Stoddart and Connally in Bukhara, the only alternative left was to post experienced British officers on the frontiers of Kashmir. Though such moves were resented by the Kashmir ruler, he could do little more than making vain protests against the increasing British interference.

It was after Ranbir Singh's death that the British Residency was established in Kashmir in 1885. The new British move in Kashmir was described as virtual annexation in a section of the Russian press. Again in 1889, the deposition of Maharaja Pratap Singh was procured by the British Resident on the pretext of the Kashmir ruler's intrigues with Russia. Simultaneously the Gilgit Agency was re-established, which was followed by starting work on projects like construction of Srinagar-Gilgit military road, Jhelum valley cart road, Jammu-Sialkot railway etc. at Kashmir Government's expense. Thus Kashmir was made to pay for the projects intended to serve the imperial interests. Forced labour (*begar*) which earned notoriety in Kashmir for the miseries it inflicted on the Kashmiri peasants and coolies in transporting the loads of British travellers, officers and soldiers along the slippery mountain tracks from Srinagar to Gilgit, and which is commonly ascribed to the Dogra ruler's indifference to the welfare of Kashmiris, in reality owed its wide prevalence to the imperial British requirements.

The fifth chapter traces the ramifications of the 'great game' and its implications for developments on and around Kashmir frontiers. In order to offset any possible Russian advance on India through the Hindu Kush passes, the British plugged the gaps at the north-western frontiers of Kashmir upto the foot of the Hindu Kush, which was the natural stable frontier. But the British strategy in the northern frontiers of Kashmir skirting Pamirs and Sinkiang was diametrically opposite. This was motivated by the British desire to keep Russia away from the Pamirs. Since neither the Afghans nor the Chinese exercised any effective control on the Pamirs, the area lay open for Russian penetration. So the British priority was for joining the two ends of the Afghan and Chinese frontiers at the Pamirs in a bid to create a wedge to separate the British and Russian empires. To achieve this end the reluctant Chinese authorities in Sinkiang were induced to expand into the Pamirs. As part of this appeasement policy towards China the British Indian authorities turned deaf ear to the Kashmir ruler's pleadings for stopping the Chinese from occupying Shohidulla and Suget, which were once in the possession of Kashmir. Such a British stand resulted in the nonsettlement of the Indian northern boundary with China in Sinkiang.

The conclusion of Pamir Boundary Agreement of 1895 did not, however, bring an end to the 'great game'. Now the focus of Anglo-Russian rivalry shifted to the Kashmir frontiers. Russia, which was sore at the extension of British authority up to Munza in 1891, objected to the British support of Munza claims on Raskam lands. Russia feared that British would use Raskam and Taghdumbash as a base for further expansion in Sinkiang by outflanking the Russian position in the Pamirs.

By 1895 Britain had completed its expansion upto the foot of the Hindu Kush and this activity had not gone unnoticed by the Russians. From 1890s onwards the Russian desire to explore the strategic overland routes to India via Leh, Gilgit, Munza and Chitral became irresistible. Numerous Russian military officers like Novitsky, Snesarov, Polotsov, Shersky, Kuznstsov, Kornilov and other specialists succeeded in obtaining British permission to travel down to India via the Karakoram, Mintaka and Kilik passes. Since the British too were keen to send their officers to restricted zones in Russian Central Asia on similar pursuits, they utilized the Russian requests for obtaining a reciprocal permission for British officers. When Germany emerged as a common threat to Russia and Britain in Europe, both powers began to act in cooperation in the changed circumstances. But this brief period of

cordiality came to an abrupt end soon after the Bolsheviks came to power in Russia.

The study is rounded off by an investigation of the various British measures taken in Kashmir and its frontier dependencies in the name of preventing the penetration of Bolshevik influence into India. The Soviet appeals to the peoples of the East exhorting them to rise against the alien imperialist rule came at a time when the British policy towards Turkey and their harsh measures to suppress the Indian national movement had alienated a large section of Indian population from the British. The *Hijrat* movement of thousands of Indian Muslims to Afghanistan and Soviet Central Asia came as a rude shock to the British. They now began to see Bolshevik hand behind every movement in India which was already simmering with discontent. The British anxiety to insulate India from any Bolshevik influence became more intense due to the Soviets launching a propaganda crusade against British imperialism in the East and also by their open support to Indian revolutionaries who operated from Soviet Central Asia. In the British eyes the whole northern frontier region comprising the North West Frontier Province, Punjab and Kashmir including its frontier territories in Chitral, Hunza, Yasin, Gilgit etc. were potential bases for spreading Bolshevism in India. Consequently Kashmir and the area around its frontier, which commended numerous routes from Central Asia into India, came into the sharp focus of the new British strategy against Soviet power in Central Asia. This meant an increasing British control over the frontier dependencies of Kashmir, wherefrom they could better monitor developments in Soviet Central Asia.

Thus Kashmir played a significant role in India's relations with Central Asia on account of its geographical proximity and cultural affinity with that region. Kashmir assumed a new importance in the context of the Anglo-Russian rivalry over Central Asia. The shadow of this rivalry continued to lurk even after the establishment of the Soviet power in Central Asia.

Soviet Policy Towards Communist Movement in Asia: A case Study of Iran, 1917-1949

Tulsi Ram

Sup : Prof. Zafar Imam

This is essentially a study of one of the problematic areas of Soviet foreign policy-Soviet relations with communist movements abroad and the consequent divergence and convergence between the objectives of the USSR as a nation-state and as a source of help and guidance for the world communist movement. This problem is investigated in detail in the Asian context by taking up a case-study of Soviet policy towards the communist movement in Iran during 1917-1949.

The study comprises seven chapters. Beginning with the investigation of a Soviet framework for policy towards Asian Communist Parties, the next six chapters deal with the specific case-study of Iran. These are divided in sequence beginning with a historical background and ending with the final phase of Soviet policy during 1945-49. The last chapter draws conclusions from our study.

Iran is a country with which the Russians had a long history of relationship. Since it was a bordering country of the Tsarist Empire, it had also developed the historical tradition of human contacts transcending imperialist objectives of Tsarist Empire. As a matter of fact, for an objective understanding of the application of our identified framework for Soviet policy in Iran, we must necessarily look at the historical background of Soviet interest in Iran. For, after all, Iran was the country outside the Western hemisphere, where Soviet Russia made an organised attempt to foment revolution during its haydays of revolutionary idealism.

Historically speaking, democratic and revolutionary movement in Iran and originated in Tsarist Russia at Baku, encouraged by the

Bolshevik movement. Moreover, the geopolitical location of Iran, as a bordering country with its overpowering British domination in the region, coupled with the socio-cultural affinity with Turko-Iranian-Tsarist population further enhanced the importance of Iran for Soviet Russia. Thus, Soviet policy towards the Iranian communist movement emerged as a characteristic case study of the Soviet policy towards the Asian Communist movement. All these points have been dealt with in the Second Chapter.

The Third Chapter deals with the formative phase of the Soviet policy towards Communist movement in Iran in the post-October-Revolution period, 1917-20. This period was crucial to Soviet policy as it laid the foundation of its future developments. Our study in this period shows, how the Soviets were actively involved in the process of the emergence of the organised communist movement in Iran. It is interesting to note that in spite of congenial environment then prevailing in Iran, the Soviets could not always see eye to eye with the policy and programmes of the Iranian communist movement. For example, the role of Iranian Communist in Gilan Revolution during 1920-21 was confronted with the Soviet policy towards it.

The Fourth Chapter analyses the development of Soviet policy towards Iranian communist movement between 1921 and 1931. During this period, many historical events took place in all walks of Iranian Society. In the beginning, Syed Zia and Reza Khan led a *Coup d'etat* in Teheran, and overthrew the central government to be replaced by their own. Later on, in 1925 Reza Khan established his new Pahlavi Dynasty after abolishing the old Qajar Dynasty in Iran. On the other hand, Communist and Jangalis-led Gilan Soviet Socialist Republic was crushed and thus the first revolutionary experiment in Asia was nipped in the bud. However, the Soviets helped the Communists to revive the movement but not without mistakes particularly in relation to Reza Khan regime. Ultimately, the Communist Party of Iran was banned in 1931 by Reza Khan. The same year marked the beginning of the dilution of the Soviet role in Iranian Communist movement.

The Fifth Chapter has dealt with the Soviet policy during 1931-41. It was such a period that proved to be a turning point for the Soviet Union and it was therefore logical that Soviet policy and programmes gradually underwent drastic changes. The decade began with the rising danger of fascism in Germany with its clearcut anti-Soviet and anti-Communist orientation. Therefore, the entire Soviet policy and programmes were concentrated chiefly on defeating the fascist ideology and its

masters. This is how, the slogan for building the anti-imperialist front came into being and the communist parties of the entire world had to follow it.

The Sixth Chapter has analysed the Soviet Policy towards Communist movement in Iran during 1941-45 when the USSR was attacked by Hitler. This is the period, when the interest of the Communist Parties had almost merged with the interest of Soviet Union in order to save the first Socialist state from the fascist forces of the world. This period became crucial for the Soviet policy because of its armed intervention in Iran. At the same time, the revival of the Communist Party in the form of Tudeh Party of Iran in 1941, made Soviet policy operational without much obstacles in Iran. The Gilan type of revolution was again launched in Azerbaijan and Kurdistan but was crushed soon. All these points have been taken up in this chapter.

The Seventh Chapter has concluded the Soviet policy towards Communist movement during post-World War II period, 1945-49. Our study in this Chapter shows that the Iranian Communist movement was again crushed in 1949 and thus the story of 1931 was repeated. However, it may be pointed out that given the situation in immediate post-war years, the Soviets had hardly any other option than to withdraw their hands from direct involvement in Iranian Communist affairs.

Thus our study has put into focus some salient features of Soviet policy towards the Iranian Communist Movement. Firstly, the international environment in the region, i.e., domination over Iran by Britain, an actively hostile power, appears to be crucial, that is why immediately after October Revolution, the Soviet leadership moved to establish friendly relations with the Iranian state and continued to support Reza Khan throughout his rule with an exception in 1941 when the entry of Red Army forced him to abdicate in favour of his son Mohammed Reza.

Secondly, the historical links between the Russian and Iranian revolutionaries greatly influenced the communist movement in Iran. That is why, the Soviet leadership displayed an unusual interest and involvement in the internal policy and programmes of the Communist Party of Iran.

Thirdly, the Iranian Communist movement, weak and divided as it was, did show independence, even displayed differences with Soviet advice and guidance in trying to work out a strategy of the development of the movement in Iran.

Finally, Soviet policy towards Iranian Communist Movement passed through a number of phases during the period under study, from the strategy of the united front with the Iranian bourgeoisie to a strategy of combatting it and developing an independent movement and ultimately to strategy of united front with bourgeoisie (1931-45).

In totality, the Soviet policy towards the Iranian communist movement during the period under study failed to bring about desired result. The year 1949 witnessed almost a total suppression of the communist movement in Iran as well as the revival of traditionally hostile relation between Iran and Russia (USSR). In the final analysis, there was more divergence than convergence in pursuing Soviet policy at two levels at the level of its relation with Communist movement in Iran and at the state to state level. Indeed, such a pattern emerged as a problematic area for Soviet policy and to this day it perhaps remains so in Asia.

The study is based on primary and published sources in Russian, English and Persian with a comprehensive bibliography.

The Scientific—Technological Revolution in the Soviet Union : A Study of its Impact on the Soviets and the CPSU (1959-1980)

Bankim Behari Bhagat

Sup. : Dr. R. R. Sharma

The history of nature and that of humanity are unintelligible if one is divorced from the other. For, while it is possible to envisage a world prior to man's existence or indeed, after he has ceased to exist, for men these have no meaning. The history of humanity unfolds itself within an objectively real world—a world of nature which is itself continuously changing through human actions.

What distinguishes human history from the history of nature is the fact that man has learnt to produce the means of his own existence. Hence, men also produce their own material life. This production derives from man's acting upon nature and it is through this practice that the social and natural worlds are changed.

The very practice of acting upon nature springs from man's eternal conflict with nature. Knowledge is acquired in this process of conflict with and action upon nature. Science thus is the cognition of laws that govern the objective world and that we obtain from practice and for practice. Technology consists of the means of production which mankind creates and uses in its production activities.

In the entire history of human society, the development of knowledge and its application, i.e. technology, was a slow process. Such implements of labour as the wheel, the hammer the lever, the spade and the milestone remained virtually the same for centuries and in the Middle Ages differed little from their ancient forerunners. It was only in recent times, especially during the Industrial Revolution, when natural forces such as the wind, water and later steam began to be used and

machines were constructed that "changes" began to take place in the implements of labour.

There was a qualitative leap in the development of technology which was also accompanied by a similar leap in science, as the transition to machine demanded a vast extension in the knowledge of the objective of the world, nature and society. Since scientific knowledge is acquired in the practice of transforming nature, its development goes hand in hand with the changes in the "mode of production". In particular, with the development of capitalism, empirical "folkloric knowledge" of the pre-capitalist period was transformed into "the first phase of modern science."

Science, however, like capitalism was a civilising force-within limits. For, science too shared the general contradiction of capitalism-between labour and capital. Even today the capitalist industry presses science and technology in the service of capital as against labour. They, on the contrary, play vital part in socialist societies by contributing to the consolidation of socialism and laying of the material and spiritual basis for communism.

The Scientific and Technological Revolutions (STR) began in the middle of the 20th century. It is currently characterised by a merger of two streams—the scientific revolution and the technological revolution—and marks a radical leap in the reorganisation and development of society's productive forces.

Cybernetics and automation constitute the main components of the STR. The substance of modern automation and "cybernisation" of production is linked with the creation of sensory-reflectory automatic devices which, with the help of a feedback, can exercise control of manufacturing process in accordance with a pre-set programme. Man is thus released from the need to perform manufacturing, motive, transport, control and logical functions. Consequently, a radical change in the position of man in production occurs and the whole system of the division of labour is transformed.

The most important social effect of these changes brought about by the STR has been the growth of productive forces. But it has also created the material and technological conditions to overcome substantial differences between mental and physical works in agriculture and industry, between town and country, between production and non-production spheres. It has influenced all aspects of life including

education, culture, the psychology of people, and the relationship between nature and society. The effects have not, however, been the same for the capitalist and socialist societies, thanks to their respective exploitative and egalitarian social structures.

The concept of social structure is wider than that of class-structure, since the groups as elements in social structure need not be social classes. Class-structure on the other hand, constitutes a particular and specifically important aspect of social structure. The social structure of a socialist society such as the Soviet Union is not marked by the absence of classes or strata. In fact, the social and economic inequality may persist in it as a "legacy" from the preceding antagonistic social orders.

Seen in this perspective, the main development of science and technology in the pre-revolutionary Russia and later in the U.S.S.R. may be divided into periods broadly corresponding to the modes of production. By the late 'fifties of this century when the West was resurging with new scientific researches and technologies in the fields of atomic, nuclear energy, space, automation and cybernetic, the Soviet Union did not lag behind. Initially misplaced Soviet notions of cybernetics and allied sciences and technologies did not prevent the research in these fields. By the end of 1950s Soviet theories and techniques (though not hardware) were on a par with those of the West.

The STR has influenced the social structure of Soviet society in two interconnected ways : first, by acting as a direct productive force ; and secondly, by transforming the subjective elements of the productive force, i.e. labour. As a productive force the STR has contributed to both industry and agriculture. It has brought about radical changes, both qualitative and quantitative, in the means of labour through mechanisation and automation processes of the production.

It has brought into being many new industries. It has also helped in various discoveries, research and technological innovations that have led to the improvement of the means of production. The STR has also provided with new sources of energy, raw materials and other production processes like rational and scientific organisation of labour, management, planning etc.

Operation of new machineries and production processes require highly skilled workers which has positively influenced diverse aspects of

Soviet social structure. The STR, through the growth of productive forces and changes in the content and process of labour, has effected far-reaching improvements in the living standards of Soviet population. In particular, it has contributed to the process of "evening up" of the components of Soviet social structure at a higher level. Thanks to the STR, there are now enough evidence to support the view that Soviet society is in the process of becoming socially homogenous with considerable convergence of classes and social strata.

The relevant processes of obliteration of social distinctions between the working-class and the collective farm peasantry, between them and intelligentsia, between manual and mental labour, between town and country, as well as of their drawing together take place on the basis of the high achievements in the development of the productive forces ; achievements in improving distribution and labour conditions ; advances in the skills, material and cultural levels of working people, and in their political activity and participation in administering social affairs.

Two recent developments appear to have given rise to the acute controversies among the Western Sovietologists regarding the analysis of Soviet political system, the nature and extent of political participation included. First relates to the general development of new concepts and methodologies in the West to analyse the political processes and more emphasis on comparative political analysis. The second factor, the STR, has brought about significant social, economic and political changes in the Soviet society—too obvious to ignore or deny them.

It is a fact that political participation or a political system cannot be understood in isolation from the broader social system. Political participation in a socialist society (for instance, the Soviet Union) must be examined as a dynamic process of consolidation and development of the forms and methods of administration and political organisation of society rather than simply as a collection of political institutions and functions established once and for all.

Much of the discredit that many Western paradigms of the Soviet Union have suffered is due to the fact that Soviet political institutions including the Communist Party of the Soviet Union (CPSU) have not received due importance as institutions of mass political participation. Indeed, it "has strong claims for recognition as one of the most powerful political institutions in any country in the world". Almost all important active participants in the Soviet political process are party members.

The essence of the party's leadership is characterised by its political and not administrative nature. It may even be said that the strong framework of party activity is the backbone of the entire participatory system and, ultimately, its control. Consequently, the CPSU is the most appropriate institution to measure the extent and nature of mass political participation of Soviet citizens.

An important index of Soviet political participation quite distinct from that in the West is membership in the CPSU. There are sufficient indications to suggest that the post-1959 period has witnessed a noticeable party membership growth. Changes in the rate of increase in party membership and in its social composition have become "incremental" in character. They have also tended to be closely associated with the changes taking place in the societal groups, i.e. classes and strata, from which party members are recruited. The most important development in the CPSU, as in Soviet society, associated with the STR has been a tremendous growth in the number of professional and para-professional specialists which cuts across different classes and strata of Soviet society and is present in all of them.

Since primary party organisations constitute the lowest and broadest units and since their bodies meet more frequently than those of Republic and All Union party levels, it is there that the mass of party members participate in decision-making process. It is seen that besides the steady rise in the number of primary party organisations, they have also been made more functional by progressive structural transformations. Representation in their bodies have become more democratic and "exclusive". Finally their monitoring and supervising roles have been effectively enlarged and extended to those which did not have such rights earlier. Consequently, the importance of primary party organisations in Soviet political life has grown considerably and increasingly larger number of members participate in their activities.

The CPSU's dominant status notwithstanding, the Soviets remain the supreme legal power of Soviet state. Compared to the CPSU of which membership is, after all, not all-pervasive and based on a complex set of criteria, for many the Soviets are the most accessible political institution to participate in decision-making process. Local Soviets, in this context, acquire an unique position.

From the early sixties onwards, the powers and functions of the Soviets, especially the local Soviets and their derivative bodies which are most numerous and close to the working people and whose meetings are

more frequent, have been considerably delineated and enhanced. The local Soviets have been endowed with the exclusive powers and the jurisdiction of their activities enlarged through various central and local laws. Special measures have been adopted to enhance the status, powers, rights and duties of the deputies and the standing committees. Necessary legal guarantees have been enacted and facilities provided to facilitate these measures. Electoral and organisational reforms have also been undertaken to make the institutions of deputies and standing committees more democratic and broad-based.

Development of the Soviets and their institutional bodies in terms of popular political participation is also reflected in their changing social composition. Their membership patterns during 1959-1980 show, for instance, a higher growth in the proportion of working class and peasantry as also of the educated. This is but natural given the qualitative and quantitative changes in the Soviet social structure during the same period.

What has been attempted in this thesis is simply to extract some of the trends in socio-economic development of Soviet society under the impact of the STR and their correlation with political developments, i.e. political participation of Soviet citizens. The study indeed finds positive conclusions to support its basic assumptions.

Political Participation in the USSR : A Study of the CPSU and the Soviets (1965-1980)

Matadin Gupta

Sup : Dr R.R. Sharma

The problem of meaningful participation of a general mass of people in the political activity of their government is increasingly assuming a crucial character, specially from the standpoint of analysis of contemporary political system. In this connection, political participation in the Soviet system is often sought to be viewed to either emphasize the marginal character of political participation, or to emphasize, the contrary point of view, that the system, as it were, offers more meaningful scope to broad masses of people to participate actively in both local as well as national policy-making processes.

The issue relating to scope and nature of political participation in the USSR had been relatively ignored by western scholars and more particularly in terms of "socialist democracy". They either ignored the issue altogether, or else examined it in terms of the ideal-functional norms of liberal democracy. Hence their model of "totalitarian" society. However, the model is, in recent times, fast disintegrating under the weight of misconceptions of its own creation. However, the growing interest among the western scholars with regard to the question of political participation in Soviet system has also led them to question the validity of the so called "Totalitarian" model.

It is now becoming increasingly clear that "the systematic biases" in earlier approach were "ideological" in nature, and obviously related to the cold war politics. The understanding of the problems of political participation requires the perspective of its own system, and an indepth analysis of given socio-political institutional structures. Perhaps, it ought to be recognised that the Soviet Political System functions on the basis of quite different political norms and ideological parameters. A number of studies undertaken on some aspects of Soviet political system in more

recent times tended to uphold an entirely different set of view about the essential avenues of participation available within its institutional framework. New insights into the functionality of the Soviet system, particularly with reference to its political culture have been provided by the institutionalists and functionalists like Jerry Hough, David Lane, T.H. Rigby and a host of others.

A study of the Soviet political system is also required to examine more carefully historical and political implications of article six in the 1977 Soviet constitution which stipulates that the CPSU is the "leading and guiding force of Soviet society". Lenin in his numerous writings and formulation on the role of the Communist Party had specifically emphasised its leading or what he called "vanguard role". In the specific Russian situation, he particularly emphasized this aspect not only from the standpoint of massively organising the Russian proletariat within the framework of a working class party, but also from the point of view of a gigantic task of building socialism in a society which was culturally and economically rather backward. The relevance of this important formulation in the contemporary context needs to be also closely analysed.

Historically, the local 'Soviets' were envisaged as political basis of the Soviet socialist society, as distinct from liberal parliamentary democracy. Article two of the 1977 Soviet constitution maintains that "the people exercise state power through Soviet of people's Deputies". Contrary to the earlier simplistic assertions, a number of recent studies tend to show that the sprawling structure of Soviets provide a broad institutional framework of peoples' participation in socio-political process and decision making and its implementations. The local Soviets appear to be at the heart of this process, carrying the responsibility for day to day work in the life of every citizen and drawing him into a more meaningful participation as stipulated in the Soviet constitution, and in the programmatic orientation of the recent CPSU Congress.

It is in this perspective that two political institutions of the Soviet society, namely the CPSU and the local Soviets have been analysed at length to assess the development of mass political participation.

There is no denying of the fact that Soviet Union is a one party state and that the CPSU enjoys a pre-eminent position in the policy formulation. Therefore, it "has strong claims for recognition as one of the most powerful political institutions in any country in the world".

However, the extent of popular participation in governance and policy making would largely depend upon the nature of functionality of various organs of the CPSU. And being a 'single' party political system, the party members are active participant in the Soviet political process.

Since the 'most important form of Soviet political participation is membership in the communist party.' There are adequate indications to suggest that the post khrushchevian period has witnessed a noticeable party membership growth. The party is apparently becoming the really mass political organisation in terms of its numerical growth over the years. The number of party members has been rising each year with a relatively smaller number of members being expelled. Changes in the number of party membership and in its Social composition have become incremental in character and they have tended to be closely associated with the changes taking place in the society. Thus, the membership of the working class has steadily increased reflecting the similar trend in the Soviet social structure. Similarly, the trend to higher educational levels in the party has continued and rather accelerated during the period of our study. Finally, if all the structural changes are put together, it can be said that the party is becoming more and more representative in nature day by day, and thereby it is opening the avenues of political participation.

It has been seen that primary party organisations play an important role in implementing the policy of the party and in strengthening its ties with the masses. The most significant fact about the primary party organisation is that all members are forced to participate in some kind of activity relevant to the decision-making process. A party organisation is the lowest unit which meets frequently and party members directly participate in decision-making processes. The important point to be noted is that the primary party organisation can be formed in any enterprise or institution and at any place of work where there are not less than three members.

The primary party organisation with their wide network provides the institutional framework in which a great many middle and lower level personnel can participate in the decision-making process on a part time basis. Their supervising and controlling roles have been effectively enlarged and extended. Finally, the importance of primary party organisations in Soviet system has grown considerably, and increasingly a large number of members participate in their activities.

The leading organs of the CPSU play significant role in the decision-making process and has the responsibility for reaching final

policy decisions. It is why that "in functional terms the real Cabinet of the Soviet political system is the Politburo, the real parliament is the party Central Committee, and real Prime Minister is the party General Secretary".

These leading organs are basic to the understanding the operational aspects of the political participation and decision-making. As we have seen, the process of decision-making, involves a large number of mass organisations and almost all the members participate in the process. However, due to various practical problems all members can not meet at one place frequently and here in lies the role of leading party organs which act as a compact body and guide the functions of the party.

The Central Committee was viewed from the formative days of the party as the highest guiding and executive organs of the party. Lenin had once emphasized the importance of the Central Committee in 1920, claiming that "not a single important organisational or political question is decided by any state institution in our republic without the guiding instructions of the Central Committee of the party".

The compositional data concerning the CC provide strong evidence of conscious and sustained efforts to make the politburo and the Central Committee more representative and more reflective of the interests of various sections of population. In its functioning also the fact of 'inner-party democracy' and the existence of divergent opinion groups' is evident.

It was found that the size of the politburo has been increasing. But the old generation dominates the politburo. In the Central Committee, we have found a constant tendency to maintain a balance between experienced and new members. This is clearly aimed at two-pronged objective of utilizing the experience as well as articulating the enthusiasm of the new members. We have also found that almost all the profession have found their representation in the CC, besides the regular party and trade union workers. We have seen that the members of the CC have impressively high educational background with increasing reduction of members with incomplete higher education.

There has been a steadily increase in the number of CC members with full voting rights, the increase in membership coupled with the meeting on short intervals, confirms the fact that CC is fast becoming more and more influential in the process of decision making. Numerical composition also reflects the interesting fact of over representation to

the small nationalities, which break the well nurtured myth of 'Russian' hegemony in the composition of the CC. The fact is that 'minority nationalities' such as Kazaks, Tajiks, etc., have more members in the CC than what would be in proportion with their strength in the CPSU.

Thus, we have seen the tendency to make CC a genuinely representative organ with increasingly larger pluralistic representation. Shortly after the period of 'individualistic alienation' there were constant attempts to make the CC really an organ "executing the party policies" in a "collective" way of functioning.

To take the local Soviets, that the lengthy and exhaustive process of election are involving millions of people and provide one of the most significant occasions for mass participation which, in turn, helps further strengthening the legitimacy of the system. The local Soviets have been endowed with the exclusive power and the jurisdiction of their activities enlarged through various central and local laws. This is important for untill the recent past the potential of local soviets to influence economic and social, cultural development was limited chiefly by the fact that they lacked sufficient concrete powers.

The development of institutions of Soviets and their derivative bodies in terms of their greater demonstration and mass political participation is reflected in their changing Soviet composition. Thus, the membership pattern of these bodies during 1965-80 shows a relative higher growth in the proportion of the working class in them.

It can thus be argued that the larger and 'pluralistic' representation in the CPSU and its leading organs and local Soviets has been on the increase in the recent decades. The considerable enlargement of membership and varied character of the Central Committee along with the increasing membership of the CPSU is a clear pointer to the broadening to the base of the policy making. The diversified character of the membership of the CPSU have had not only a quantative impact on its character but also helped in making the leading organs of the CPSU, qualitatively different, i.e. with pluralistic representation and increasing participation of various stratas of the masses.

Petrochemical Industry in Saudi Arabia : A Self-Reliant or Dependent Development ?

Rashid Masood

Sup: Dr. Girijesh Pant

Saudi Arabia prior to 1973 did not have sufficient investment capital nor the requisite infrastructural facilities to set up the basic industries in the Kingdom. Education was limited to religious courses and development of science and technology was a taboo for the local habitants as they considered it a negation of Islamic culture due to their gross ignorance and massive illiteracy. It was a closed economy dependent to some extent on the earnings from the annual pilgrimage, Al-Hajj but the major share of State revenues accrued from oil exports. The exploration, exploitation and sale of crude oil was the responsibility of the multinational oil corporations which were interested in maximising their profits by keeping crude oil prices low. They neither increased the prices of the crude oil nor made any attempt to utilize the associated gas for the development of the economy. The oil refineries were set up by the multinational oil companies (MNCs) in the consumption areas far away from the resource producing countries. In fact, the MNCs subserve the ends of the industrialized countries which opposed setting up of petrochemical industry in Saudi Arabia and other oil exporting Arab Gulf States so as to ensure the continuance of raw-material (oil) exports without processing it into value added products. They contended that oil-based industries would not be viable in these countries mainly because :

- (1) The petrochemicals manufacturing industry involves sophisticated technology. The lack of physical and social infrastructure, technical skills, dearth of managerial, administrative and supervisory expertise and fierce competition in marketing these products would make the operation of the plant unviable ;

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- (2) The petrochemical plants would inevitably have higher capital costs compared to similar plants set up in the industrialized world due to additional costs on the development of infrastructure, transportation of machinery and equipment, and also on account of higher payments of wages and salaries to the imported labour and experts ; and
- (3) The petrochemical products would enter into market at a time when the world market was already glutted with petrochemical products.

The significant increase in export earnings, owing to the steep rise in oil prices in 1973-74, was a turning point not only in the economic and political life of Saudi Arabia but in that of the industrialized world also. With 24 per cent of the world's proven crude oil reserves (in 1985), Saudi Arabia emerged as one of the most important countries in the modern world.

Saudi Arabia, like other Arab-Gulf oil exporting countries, had an apprehension that continuing the exports of oil in the crude form would leave the Kingdom without any economic base after the oil was totally depleted. The Saudi Government, therefore, considered various options of utilizing the accumulated oil export revenues into capital formation of a nature which could reduce the overwhelming dependency on oil-exports and establish a diversified economy leading to self-reliance before the oil reserves exhausted. Given the huge capital surplus and abundant raw-material, it embarked on a long term industrial planning to develop export oriented capital-intensive hydrocarbon based industries in which the Kingdom had a potential comparative advantage. Notwithstanding the arguments advanced by the developed countries against setting up of petrochemical industry, Saudi Arabia in its industrialisation programme considered petrochemical industry as a leading sector. The rationale for the development of petrochemical industry was to use the non-renewable natural resources as an industrial feedstock capable of giving a higher rate of return per unit of oil or natural gas consumed than the simple export of the basic raw-material. Luis Turner and James M. Bedore in the book entitled "Middle East Industrialization" (1979) have estimated that "a barrel of oil worth \$ 12 can produce goods worth approximately \$ 84 when turned into a commodity plastic such as polypropylene and if converted to products such as polyester film or agricultural chemicals, the value is increased to 50 to 100 times". Given the fact that higher value can be realized by processing the raw-materials, Saudi Arabia planned development of large scale export oriented gas based

petrochemical industry. It envisaged integration of the hydrocarbon sector with the national economy and creation of forward and backward linkages by promoting new industries and economic activities. This would ultimately transform the economic structure from a developing country merely exporting raw-material into an industrialised power producing and exporting value added processed chemical products.

The initial reaction of established petrochemical producers-notably those in the US, Western Europe and Japan was not favourable. Apart from the reasons mentioned earlier, they mainly argued that the petrochemical complexes would be economically unviable because of higher capital and operating costs, and marketing difficulties in view of surplus production capacity in the world. But actually the fact of the matter was the underlying apprehension in the mind of petrochemical producers of the industrialized countries that the successful operation of the Saudi venture, based on cheap feedstocks and fuel, would land them in ostensible loss of profit by encroaching on their own world market. However, Saudi Arabia went ahead with its industrialization programme.

The industrialization programme of Saudi Arabia, particularly the development of petrochemical industry has been examined in the present study under the hypothesis that it plays a leading role in diversifying the economic structure, negating the continuum of rentier economy and making the economy self-reliant and increasingly less dependent on oil exports. Deductive and analytical methods have been used to examine the industrial planning policy and its achievements. An attempt has also been made to present in an orderly manner the development of hydrocarbon-based industries and its role in the economic development/economic diversification of the Kingdom. It specifically deals with the evolution of the Saudi development planning, perception of petrochemical based industrialization and various policy inputs designed to help in the industrialization programme.

The changing emphasis in the Development Plans of Saudi Arabia reflect the stages through which the industrialization programme has to pass. While the First Development Plan, 1970-75 laid emphasis on expansion of physical and social infrastructure, the Second Development Plan, 1975-80 stressed on increasing the absorptive capacity and adopted a strategy of resource specialization designed to maximise the natural advantages in natural oil and minerals. A distinct change is noticed in the Third Development Plan, 1980-85 where in the strategy for industrial planning is shifted from the expansion of physical infrastructure towards increasing the output capacities in the production sectors with stress laid on the human resource development in order to minimize expatriates.

All the three Saudi Development Plans in general and the Third Plan in particular were committed to reduce the exclusive dependence of the economy on single export commodity i.e., oil and to accelerate diversification, which is one of the dominant structural objectives of the whole economic development process. While planning huge gas-based petrochemical complexes, Saudi Arabia did take into consideration the pros and cons of such ventures. It took note of the unfavourable factors like lack of :

- (1) physical and social infrastructure ;
- (2) scientific and technical skills ;
- (3) managerial, administrative and supervisory expertise ; and
- (4) marketing capacity

It also took into consideration the high capital costs involved in setting up of these plants in Saudi Arabia and unfavourable world demand-supply scenario for petrochemicals and virtually non-existence of technological and educational base.

The favourable factors were :

- (1) with 24 per cent of the world's proven oil reserves (in 1985), it became the world's largest producers of energy raw-material and enjoyed a prominent position in the world ;
- (2) the feedstocks and fuel for petrochemicals was associated gas (rich in ethane and propane content) which was produced as co-product with oil and had no alternate uses making the opportunity cost of gas as zero ; and
- (3) it had surplus capital and had, therefore, not to compromise on developmental priorities and targets due to financial constraints.

In its industrial planning, a multipronged strategy was adopted to overcome the shortcomings/offset the disadvantages and optimally utilize the favourable factors to achieve the goals it had set forth for itself. The Saudi Government adopted growth pole strategy for its industrialization programme and identified two main growth poles for setting up hydrocarbon based industries, viz., Al-Jubail on the Red Sea and Al-Yanbu on the Arabian Gulf Coast. The world's largest construction programme was undertaken so as to provide the necessary physical

and social infrastructure, such as roads, ports, transport, telecommunication, power, water, etc. Gas gathering and treatment system and East-West pipeline to provide the feedstocks to the petrochemical complexes were also established. Feasibility studies for individual projects were prepared by reputed consultants/foreign companies. Necessary developmental organizations, such as Saudi Arabian Basic Industries Corporation (SABIC), Royal Commission for Jubail and Yanbu (RCJY), Public Investment Fund (PIF), were formed and strengthened to implement the industrialization programme. The Saudi Government opted for joint-ventures with foreign companies on the basis of financial and managerial shares to set up the petrochemical plants. This was not only to benefit from the experience/expertise of foreign partners in selection of technologies, construction and operation of plants and marketing of the products but also to upgrade the skills of local workers through in-plant experience at plants of foreign partners abroad.

To attract suitable foreign partners in the joint-ventures, various incentives were given to safeguard the interest of foreign partners. These included "incentive" crude entitlements and providing cheap capital besides ensuring availability of feedstocks and fuel at sufficiently lower prices. The combined offer of these immense incentives and subsidies lured large multinational oil companies from all over the world to participate in the development of basic petrochemical industry in the Kingdom. Consequently, agreements were signed between SABIC (a Stateowned Corporation) and a large number of multinational oil companies, with 50 per cent equity each, to establish petrochemical plants under the joint venture formula in the two industrial complexes viz., Al-Jubail and Al-Yanbu.

SABIC selected joint-venture partners who were well-known for their managerial capabilities, technical achievements, marketing expertise and willing to transfer the requisite technology and to provide training to Saudi personnels. It entered into agreements with the best managed foreign companies such as Celanese, Texas Eastern, Exxon, Mobil and Shell of the US and other international companies that included Mitsubishi of Japan, Netse OY of Finland, Lucky Goldstar of South Korea, etc. Though the main interest of the multinational oil companies seemed to be the "incentive" oil entitlements, in reality it appears that they wanted to consolidate their position in the field of base petrochemicals products. This was manifest from the change in the strategy for diversifying into downstream industries as an extension of their refining expertise.

Under the joint-venture agreements while SABIC provided the low cost feedstocks and fuel and capital at subsidised rates, the foreign partners mainly contributed in terms of expertise in management, construction, operation, maintenance of the plants and the marketing of the products through their worldwide and well established marketing and sales network. The joint-venture agreements invariably included a clause for transfer of technology and development of skills of local personnels in different fields like management, administration, operation, maintenance, etc. Saudi Nationals are expected to acquire, from their training in the multinational firms and jobs in the plants, the technical and managerial skills which would enable them to replace foreign workers and minimise the economic dependency on foreign workers and experts. In its efforts for localization of the productive resources, human resource development (HRD) programme was taken up on a massive scale particularly to increase the level of literacy in the Kingdom and upgrade the technological level. The share of the HRD in the total Plan outlay increased to 18.5 per cent in the Third Plan as against 15.9 per cent (based on actual and estimated values converted into 1979-80 prices) in the Second Plan. The massive educational, vocational and technical training programmes for HRD are expected to play a predominant role in staffing the petrochemical complexes that would not only reduce the dependence on expatriates but will also cut short the labour cost.

The capital cost of the plants in Saudi Arabia were estimated/projected to be significantly higher than those of the similar plants in developed countries. However, the capital costs were to some extent reduced by setting up large sized plants and adoption of modularization technique. As the feedstocks and fuel was to come from associated natural gas, which was being flared, it was priced very low. These factors minimized the cost of production, making it internationally competitive.

Besides the marketing arrangements agreed to between SABIC and foreign joint-venture partners, SABIC established its own marketing network to increase its share of marketing the products. In June 1984, SABIC established two Riyadh based companies viz., SABIC Marketing Company and SABIC Marketing Technical Services Company. SABIC Marketing Organization has established sales offices in important trading centres of the world, such as London and Hongkong and acquired storage/warehousing facilities in Rotterdam and Singapore. Construction and owning of shipping fleets was another step taken by the Saudi Government to strengthen its marketing efforts.

The successful commissioning of large petrochemical complexes at Al-Jubail and Al-Yanbu ahead of schedule has proved that the Saudi Government's policy of setting up plants on joint venture basis with foreign companies has been a success. This also proved the ability of SABIC in taking right decisions in regard to selection of joint-venture partners, foreign collaborators, suppliers of equipment and contractors for the construction of plants. The recent economic and industrial developments have proved that SABIC's management was at par with its international counterparts.

Feedstocks and fuel constitutes about 70-80 per cent of the total cost of production of ethylene. Saudi Arabia has decided to supply the associated gas at US \$ 0.50 per million BTU as against US \$ 3.5-3.75 per million BTU in the U S A and US \$ 4.00-4.50 per million BTU in Western Europe. The supply of gas at such a cheap price will not only offset the disadvantages of higher capital cost but also bring down the cost of production of petrochemicals to an extent that Saudi Arabia/joint-venture partners would have adequate margin to compete or undercut the price in the event of fierce competition from established producers. Gas-based petrochemicals produced in Saudi Arabia would continue to have a decisive edge over naphtha based petrochemicals produced in the US, Western Europe, Japan and Canada. Even the gas-based petrochemicals produced in the US or Canada would be costlier because of high cost of feedstocks in these countries. Saudi Arabia, therefore, is in a position not only to compete successfully in many of the established export markets of the US, Western Europe and Japan but also to penetrate into the domestic markets of these countries. The leading producing countries of petrochemicals in the world, having taken note of this situation, are restructuring their petrochemical industry by closing down the inefficient plants, merger of companies based on product management scheme and moving towards specialities. EEC is adopting protectionist measures by imposing tariff on imports from Saudi Arabia. EEC imposed tariffs 13.5 per cent on methanol, 14.3 per cent on ethylene glycol, 13.8 per cent on LDPE and 6.7 per cent on styrene in 1984 after Saudi Arabia exceeded export ceiling fixed by the EEC. Japan is reconciled to imports of cheap basic raw-materials from Saudi Arabia and further processing it into value added products. It is expected that in due course Western Europe would also realise the economic advantage of importing cheap basic building blocks from Saudi Arabia and further processing it into value added products. It would, thus, be seen that Saudi Arabia has not only been successful in setting up huge petrochemical complexes and marketing the products produced at these complexes but also has carved out a unique place for

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itself in the world petrochemical industry. Al-Jubail and Al-Yanbu complexes have emerged as major nuclei for economic development. With the setting up of these complexes, Saudi Arabia has gained in following respects:

- (1) Utilization of associated gas, which was hitherto being flared, into tradeable value added petrochemical products.
- (2) Induction of required skills through foreign partners in Saudi nationals to instal, operate, maintain and manage the petrochemical plants and market the products.
- (3) Intensification of human resource development which is likely to have multiplier effect and help Saudi Arabia to have its own fully skilled and trained manpower for erection, operation, maintenance and management of future plants.
- (4) Creation of physical and social infrastructure minimizing the disadvantages Saudi Arabia had in locating capital and technology intensive industries. With this the cost of future plants in Saudi Arabia is likely to come closer to that of similar plants in developed countries.
- (5) The spin off effect of the establishment of these complexes resulted in setting up of a number of downstream processing industries. The entrepreneurship thus developed would not limit itself to petrochemical sector and it will have spread effects in other sectors as well.
- (6) Development of light and supportive industries, metal manufacture, construction materials, chemicals and expansion of industry in areas such as cement, industrial gases, intermediate petrochemicals, glass products, metal products, automotive parts etc. would provide larger economic base.

Thus, with the setting up of large sized petrochemical complexes Saudi Arabia has not only benefited from the twin advantages of cheap feedstocks and economics of scale but from all round development in other sectors of the economy as well. The transnational companies which had earlier been given incentives of cheap capital, cheap feedstocks, oil entitlements, etc. may now come up on their own for setting up new plants in joint-ventures. With a view to avoid competition within the Arab-Gulf in marketing petrochemical products, persistent efforts have been made for coordination and integration of industries in the region. The measures taken for the upgradation of technological

base and development of new skills and direction of R & D efforts towards innovation and new product development, are likely to bring the desired benefits to the Saudi economy. However, these will be visible in the next phase of Saudi industrialization. Therefore, it will be premature to draw any final inferences because the industry is still in the nascent form and has yet to realize fully its potential of forward and backward linkages which provides the content to the ideology of development. There can, however, be no two opinion that with the setting up of large sized highly capital and technology intensive industry, Saudi Arabia has succeeded in diversifying and restructuring of its economy and upgrading the scientific and technical skills of the population. This rapid pace of development in a theocratic Tribal State has hardly any precursor in the world industrial history. It has not only transformed the entire economic structure but will also have far reaching effects on the stratification pattern of the Saudi Society.

Secessionism in the Politics of the Congo Kinshasa (Zaire) : (1960-1978)

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Mohd. Omarah

Sup: Prof. Anirudha Gupta

The topic of this study is secessionism in the politics of the Congo-Kinshasa (Zaire) from 1960-1978. Methodology adopted was mainly historical as well as analytical based on the data obtained in primary and secondary sources.

The thesis was divided in six chapters and conclusion. The important conclusions were :

Chapter I contained geographical description of the country in the heart of African Continent with its borders with nine other African countries which gave it a strategic importance. The Chapter verified that the Congo also possessed considerable agricultural, mineral and great hydro-electric resources which led to competition among foreign powers to have always shares out of it. It was also clear that the Congo has witnessed past and present exploitation of its resources by foreign economic companies particularly those of Belgium. Ethnic diversity and complex tribal structure in the Congo contributed to lack of unity and homogeneity of any kind (social, linguistic or religious).

This ethnic variety created a wide differences among the tribes. It also had adverse effect on political life ; as it helped the differences among political parties and its leaders, fed secessionist movements and existed disintegration all over the country. Moreover the population of the Congo were divided to numerous ethnic groups spreading across its territorial borders with its neighbours which created social and political issues between the Congo and its neighbours.

Belgium supported and encouraged tribal and cultural divisions and conflicts. It also tried to damage the social, political unity and

integrity of the country so as to realize its economic interests. In the last part of this Chapter it was clear how the Congo obtained its independence on 30 June 1960 and was named Republic of the Congo, later the country was named Zaire on 27 October 1971.

Chapter II was devoted to investigate the economic, administrative, social and educational challenges from its colonial masters. It surveyed the main issues which faced the Congo after independence which can be summarized as follows :

- (a) The occurrence of the mutiny of the Force publique on 5 July 1960, which dealt a blow to the national unity and offered a chance to the coming of Belgian troops and also the coming of U.N. troops to restore law and order.
- (b) The rise of the Constitutional Crisis among president Kasavubu and prime minister Lumumba on 5 September in the same year, which resulted in more confusion and disintegration in the country.
- (c) The existence of continuous changes in the government system in the period from 5 September 1960 to first August 1961. These changes created chaos and disruption. This period also witnessed the murder of Lumumba and his colleagues on 13 February 1961, which resulted in further deterioration of economic, political and military situation in the Congo.

Chapter III was directly concerned with the spread of secessionist movements all over the country. It offered analytical background to Katanga secession on 11 July 1960, and how fighting broke out between Tshome's gendarmie and Central government's army from one hand and between Tshombe's gendarmie and the U.N. troops from the other.

In the period from 19 September 1961 to 24 July 1962 there were more than one trial to solve the issue of Katanga's secession by peaceful means, but unfortunately these trials were frustrated. Instead Tshombe started recruiting a great number of foreign mercenaries to help his military troops against the Central government's army, as well as the U.N. troops. The reasons of Katanga secession can be analysed as follows :

- (a) Tshombe believed that Lumumba's Central government was trying to establish a communist state in the Congo ; so he wanted to prevent Katanga from becoming a victim of Communism.

- (b) Tshombe wanted to establish a huge Kingdom on ethnic basis supported by his original Lunda tribes. In his vision this kingdom included Leopoldville (kinshasa now), south Kasai, Katanga (Shaba now), northern Angola and northern Rhodesia (Zambia now).
- (c) Katanga is the richest province in the Congo and the head-quarter of Belgian company Union Miniere, which enabled it to be the Centre of heavy foreign investments in the form of mines, metallurgicals, plants, secondary industries, communications and social services, especially in its southern part. The rapid industrialization and urbanization in southern Katanga attracted Baluba tribes of Kasai, who managed to obtain most of jobs available either in administration or industrial and commercial fields. This position aroused considerable feeling of enmity and frustration among genuine indigenous Katangese tribes against Kasaian immigrants especially Baluba and created social tensions among them.

Naturally the genuine Katangese resented the exploitation of their region by strangers. They felt with economic grievances and found themselves out of the work and deprived from opportunities in their own province. So in their misery, anger and frustration they turned fighting against Baluba of Kasai.

- (d) The role played by European settlers in Katanga in making the idea of secession economically attractive and politically meaningful. Those settlers played a significant role and in some instances a decisive role in shaping the course of Congolese politics particularly in Katanga.

Even before independence there was autonomos tendency among settlers in Katanga ; as in May 1958 the Union Katangaïse was formed. This Union included European settlers, who were working in both colonial administration and private companies in Katanga. This Union desired the division of the Congo into large autonomos regions linked with confederation with Belgium. It also encouraged immigration from Belgium and other western countries to Katanga and the diamond fields in Kasai. It also wanted a Belgian military presence in Katanga to preserve it against communist infiltration or any other subversive movements. In the middle of 1959

the Union joined CONAKAT party and in December 1959 the links between them were strengthened as the Union provided technical and economic assistance to Tshombe. Consequently with the approach of independence, the powerful business circles supported by that Union endeavoured to establish a separate Katanga state.

The settlers in Katanga also have established a tradition with African tribes full of toleration, mutual respect and easy race relations. This tradition of racial co-operation had contributed to their separation feelings.

That tradition was not derived from their conviction of liking Africans, but it was just a kind of flattering so as to realize their economic privileges in Katanga.

This Chapter also aimed at discussing the secessionist movements in the other provinces of the Congo. The first movement occurred in southern Kasai and was led by Albert Kalonji on 8 August 1960. The second erupted in Stanleyville and was led by Antoine Gizenga in December 1960. The third happened in Kiva province and was led by Anicet Kashamuru on 31 December 1960. But all these movements were crushed in short periods.

Chapter IV endeavoured to examine the situation of the Congo after Katanga's secession was ended on 3 January 1963.

It was hoped in that period that the country would feel relief from disturbances and disintegration, on the contrary it faced a number of issues which can be summarized as follows :

- (a) The establishment of the National Liberation Committee in summer of 1963 from supporters of Lumumba. This Committee tried to overthrow A Doula's government by violent means and helped by its activities in the deterioration of relations between the Congo and its neighbouring countries.
- (b) The withdrawal of U.N. troops on 30 June 1964, which was another factor that helped the spread of disorder in the Congo.
- (c) The appointment of Tshombe as prime minister to Congolese Central government, which was having a bad reaction inside and outside the country.

- (d) The proclamation of the rebellion in Stanleyville on 5 September 1964 against Tshombe's government. In reaction Tshombe continued in recruiting more mercenaries and fighting became bloodier and the whole country was sinking into chaos everyday. This position led to the American and Belgian intervention in the Congo's internal affairs on 24 November 1964.

In this Chapter also it was clear that the coming of Mobutu's government to power on 24 November 1965 was evidenced that this government had failed to solve the eternal economic and political disintegration issues of the Congo : because President Mobutu was faced in the period from 1965 to 1976 by great economic difficulties and military opposition.

Chapter V attempted to investigate Shaba Crisis which began when the force of 1500 mercenaries invaded Zaire from Angolan border on 8 March 1977. The invaders were Katangan exiles and former supporters of Tshombe. They described themselves a Congolese National Liberation Front and were led by General Nathaniel Bumba. They wanted to overthrow Mobutu's regime, to establish a government of national unity and to gain control over the strategic mineral area (Shaba). The Chapter also included the developments which followed in next year in continuation to disturbance and disorder which prevailed all over the country ; as around 4500 rebel troops seized Kolwezi city in a well-executed operation from 11 to 13 May 1978. On the first day the rebels dispersed the troops of the Central government, occupied Kolwezi city, Mutshatsha, Kolwezi airport and destroyed most of the mining installations there. Again the rebels were identified as former Katangese gendarmes who invaded Shaba in March 1977 and were led by Nathaniel Bumba. They had been living as refugees in Angola since they were driven out after the end of Katanga secession. They wanted to overthrow Mobutu's government, to dismiss foreigners working in mining companies and to destroy economic resources of the country.

The reasons of Shaba and Kolwezi invasions can be traced through the economic difficulties which faced Mobutu's regime from 1965 to 1976, the support of Belgian and Foreign interests for rebels, the conflict between National Liberation Front and Mobutu's government, tribal conflict and deterioration of relations between Zaire and its neighbouring countries, especially Angola and Zambia. Shaba and Kolwezi invasions were resulted in more fighting, more economic difficulties and that a great number of refugees fled Zaire to its neighbours.

Chapter VI was specialized for international intervention in the internal affairs of Zaire through all its crises.

No doubt that the strategic position of Zaire, its agricultural and mineral resources led to competition among foreign powers from east and west to interfere in its internal affairs from time to time. This intervention took three shapes economic, political and military. The countries which were involved were U.S.A. and its allies from Western European countries, the Soviet Union and its allies from Eastern European countries and other Arab, African and Asian countries.

The specific goal behind this international intervention was to prevent the establishment of a strong wealthy country, to keep its wealth out of its black hands to keep colonialism present in Africa for ever, to keep that country divided into small ineffective fragments and to destroy its effective leadership. The determination of foreign powers was always not to have a successful government in a country so large, wealthy in its natural resources, strategically and geographically located as Zaire.

The appendices included analysis of the role of the U.N. troops, which came to the Congo at the request of its Central government to maintain law and order, to preserve the country's unity and integrity.

Apart from extending economic, social, technical assistance, the U.N. played a vital military role in suppressing various secessionist movements and curbing tribal conflicts in the Congo. The U.N. troops were able to urge the withdrawal of Belgian troops from the Congo as a whole and from Katanga in particular. It did help in ending Katanga secession and putting an end to other secessionist movements in Southern Kasai, Stanleyville and Kivu provinces. The U.N. tried to eliminate foreign mercenaries, to check the international intervention in the Congo's internal affairs and to keep cold war out of that country. By all accounts the U.N.'s efforts in the Congo has been a remarkable contribution without it this country would have fallen into deeper difficulties and might have become a scene of war. Similarly the O.A.U. tried its utmost best to solve the Congo's crises in spite of great obstacles which faced this organization.

A number of maps also were provided to clarify the geographical location of the Congo, the borders with its neighbours, its ethnic complex, its agricultural and mineral resources.

Industrialization Policy of Peru during 1968-1975 and its Impact on Multinational Corporations

Vishnu Priya

Sup : Prof. R. Narayanan

The major objective of the present study is to examine the nature and content of the structural reforms evolved and implemented in Peru during 1968-75 by the military government led by Juan Velasco Alvarado and analyse more narrowly the challenges that the military government encountered with the Multinational Corporations (MNCs). The stated objective of the military government was to redeem the economic independence of Peru. The policy measures the government evolved obviously impinged on the role and the interests of the MNCs already operating in Peru, importantly in such sectors as mining, manufacturing and banking. What is intended in the study is to highlight the different responses of the MNCs operating in the three major economic sectors and assess what kind of revisions and changes that had to be brought about in the government's economic reforms. Examination of these elements will bring forth the basis of the different kinds of responses, compromises and pressures with which the MNCs reacted to the industrialization policy.

The relevance of a study along these lines of a developing country such as Peru cannot be gainsaid. Whatever may be the motivations of the military government, the economic policies envisaged by Velasco embodies a concerted and conscious effort on the part of a ruling elite in a developing country to usher in structural changes. Indeed, it is a good case study of the efforts of a developing country on the "periphery" to overcome the obstacles to development encountered by it. Though it is difficult to quantify the degree of success or failure experienced by the military government in its avowed objective of renegotiating the terms on which the MNCs could operate in a "periphery" country, what the study purports to analyse is the limits within which a reformist

government such as that of Velasco could function. In fact, it attempts to illustrate the degree to which a developing country with a long tradition of MNC domination is hemmed in by forces essentially beyond its control and shows a pointer to other developing countries similarly placed seeking economic autonomy.

Against this broad framework, the analysis is treated in six major chapters. The introductory part presents a brief background to the industrialization process in Latin America in general and highlights the role and influence of the MNCs towards this goal; examines the economic structure in Peru prior to the military takeover in 1968 and emphasizes particularly the industrialization policy under different regimes prior to the advent of the military and offers an overview of the general policies formulated and initiated by the military after it took control of the government which were aimed at promoting autonomous industrialization and concomitantly the growth of strong Peruvian industrial base. It also focuses on what the military government perceived to be major obstacles to their goals and the necessary initiatives it conceived to eliminate those obstacles to their goals. Total elimination of the MNCs was certainly not on the agenda of the military government. This was made clear not only from the specific content of the stated policies of the military government but also by the fact that the realization of its policy goals was predicated upon the new investments that the MNCs were expected to make under the revised terms of their role. What the military government desired was to essentially reorient the MNCs in order that they would contribute to the national goal of rapid autonomous industrialization. The national goal as spelt out in respect of the MNCs was that they would work towards lessening the dependent nature of the Peruvian mining sector, the high concentration of the manufacturing sector and the rechannelling of capital and credit towards the designated economic activities. In other words, what the military government intended was (i) to control the entrepreneurial activities of the MNCs in the mining/petroleum sector; (ii) to limit the growth of the manufacturing MNCs and transfer control over the managerial activities to Peruvian entrepreneurs, and (iii) to reduce and limit the international banks' access to domestic savings and their control over the distribution of credit.

The second part attempts an analysis of the responses of the MNCs engaged in the three sectors. What the final outcome and the consequences of the government's initiatives and the reactions of the mining MNCs are also surveyed. The specific policy initiatives in the manufacturing sector and the evolving responses of the MNCs engaged

in the manufacturing sector are also described. The set of policies implemented by the military government to acquire control over the Peruvian financial sector, the growing need of the government for foreign capital and international credit facilities to carry out its various projects and, the relationship that developed between the military government and the MNC banking sector have also been examined. The study in sum indicates that different MNCs are likely to have different responses to the efforts to eliminate structural obstacles to industrialization process. Of the three types of MNCs, the mining MNCs are unlikely to support or positively respond to structural changes for, it obviously conflicts with the corporate interests of these MNCs. Structural changes that call for entrepreneurial role on the part of state in the primary goods production sector impinges on the entrenched interests of the MNCs engaged in that sector. To that extent, they would oppose or undermine initiatives that pave the way for structural changes. The responses of the manufacturing MNCs are likely to be different from that of the primary goods producing MNCs, because of the positive and direct stakes that the manufacturing MNCs have in indigenous industrialization in developing countries. To that extent although mining MNCs are likely to conflict with developing countries' initiatives towards industrialization, manufacturing MNCs are less likely to oppose such initiatives per se. However, where the benefits of distribution of such an industrialization are denied, it is likely that manufacturing MNCs too would unfavourably respond to structural changes. Given the over-arching influence and control that international banks exercise over both the mining and manufacturing MNCs, it is they who in the ultimate analysis would decide the success or failure of any structural initiatives taken by the developing countries. The choice is quite obvious for the developing countries placed in such circumstances. Either it is possible for them to seek autonomous industrialization and face the consequences of the challenges that the MNCs pose or they can seek a process of industrialization by and large dictated by the MNCs.

Cuba's Relations with the Soviet Union, 1968-1980

Ash Narain Roy

Sup: Prof. R. Narayanan

The major objective of the dissertation is to delineate Cuban-Soviet relations beginning with 1968 to 1980 and attempt at a more realistic evaluation of the nature and complexities of the evolving relationship between the two countries during the period under study.

Available scholarly literature on Cuban-Soviet relations is extensive and voluminous. However, they have been more or less trapped in an overly dichotomized debate. To that extent, they do not reflect fully the complexities and dynamics of Cuba's interests, objectives and constraints in forging its relations with the Soviet Union. Divided into two major viewpoints, these analyses tend to either overly emphasise Cuba's total dependence on the Soviet Union leading to a dependent relationship or underline Cuba's autonomous commitments in which the role of the Soviet Union is shown as minimal.

In the view of the present writer both analyses are inadequate. For, the "autonomy" thesis ignores the real material constraints of Cuba to act independently without any support from the Soviet Union so far. Whereas the "surrogate" thesis is glaringly ahistoric, for it ignores the fact that even during periods of Cuba's critical dependence—economic and military—on the Soviet Union, Cuba could and did pursue an active globalist policy independent of its Soviet connections.

It is against these two rather contrary approaches to the understanding of Cuban Soviet relations, an effort is made in the present monograph to re-evaluate the nexus of relationship between the two countries and offer some fresh perspectives.

The study begins with the year 1968 which, in a sense, constitutes a definite departure in the pattern of Cuban-Soviet relations beginning

from 1960. For reasons of paucity of materials, particularly of the very recent trends and directions in Cuban-Soviet relations, the study concludes with the year 1980.

The scheme of chapterization is as follows. The background Chapter I surveys Cuba's relations with the Soviet Union from the time of the consummation of the Cuban Revolution to 1968, highlighting the rather erratically fluctuating trends. Chapter II endeavours to examine Cuba's political, military and ideological relations with the Soviet Union in the period, 1968-1975 and evaluate how each of these factors tended to reinforce or not the others. Chapter III attempts to assess Cuba's growing economic links with the Soviet Union during the entire period under study. To this end, an attempt is made to examine specific variables of economic relations such as the direction and composition of Cuba's foreign trade and the magnitude of economic assistance in respect of credit facilities and trade partnership from the Soviet Union. Chapter IV attempts an appraisal of the role of Cuba and the Soviet Union in Africa, especially Angola and the Horn of Africa and assess the motivations behind the joint Cuban-Soviet ventures there. Chapter V examines the antecedents of Cuban-US rapprochement in the 1970s and analyses its impact—both favourable and adverse—on the evolving Cuban-Soviet relations during the period under consideration.

The study being a survey of Cuban-Soviet relations between 1968 and 1980, the methodology that is adopted is historical as well as analytical. On the basis of the survey, at the end of each chapter some specific conclusions are drawn to check the major hypotheses of the present work.

In the concluding chapter after summarizing the important elements of the nature and dynamics of the evolving Cuban-Soviet relations during the period under study, some general conclusions and prognostications are offered, important among them are as follows:

- (i) Cuba and the Soviet Union have moved closer to each other in the post-1968 period and although there still existed some differences of perceptions and perspectives, such pronounced divergences and conflicts seen in decade of 1960 between the two countries have given way to a period of greater convergence and cooperation. Cuban leaders have moderated their stances on issues which had strained Cuba's relationship with the Soviet Union in the past decade.

- (ii) Cuba's overall dependency situation which was substantial in the aftermath of the Revolution has remained largely the same during the period under consideration. Nevertheless, what could, however, be stressed is that Cuba's economic dependence on the Soviet Union is not based on economic exploitation or on equity interest in enterprises.
- (iii) The dramatic changes in Cuba's domestic and foreign policy orientations, in the period under study, by and large, favoured overall Soviet global objectives. What is important is that such changes resulted more from the internal dynamics of the Cuban revolutionary process than on account of any identifiable Soviet pressures or influence. The growing convergence in their policies responded essentially to the prevailing international political situations.
- (iv) Although Cuban-Soviet short and medium term policy goals and interests generally converge involving a wide spectrum of issues, given the apparent difference in the geographical situations, levels of economic development and priorities in world politics, Cuban and Soviet roles may potentially take divergent directions in the long run.
- (v) Cuba has gained certain leverage vis-a-vis the Soviet Union, especially since the Angolan episode. Castro has shown a remarkable capability to promote Soviet objectives in certain regions which the Soviets could never replicate on their own. Cuba's dual position as a member of both the Third World and the Socialist camp is a primary source of its influence in both constituencies.
- (vi) Cuba's policy options, especially in regions of vital Soviet national and security interests, however, have remained severely limited. On the other hand, where Cuban and Soviet objectives and interests coalesce, the Cubans have undoubtedly enjoyed greater independence of action.
- (vii) There is an asymmetrical relationship between Cuba and the Soviet Union where the latter is plainly the dominant power, but that there is also a mutuality of dependence in that relationship which has allowed Cuba to formulate its own foreign policy. Clearly, a *quid pro quo* relationship is discernible between the two countries.

Presidents John F. Kennedy and Lyndon B. Johnson's Response to the Black Movement, 1961-1968

Deepak Shekuji Gaikwad

Sup. : Dr. R.P. Kaushik

The founding fathers of the United States of America adopted a Constitution based on the ideals of liberty and justice for all. But at the same time they ignored their Black people. The Black Americans remained slaves up to 1863. After emancipation the Blacks were severely segregated and discriminated in all walks of life. It was strange that it happened in America which in her Declaration of Independence had proclaimed that "all men are created equal".

After the emancipation right up to the aftermath of the World War II the Federal Government took some positive steps towards the Black's integration, desegregation and their upliftment. But the progress was too slow and too frustrating for this minority. On the other hand, during this period the Black community had no effective leadership and no mass movement emerged which could have protested against their plight. Consequently, there were no effective pressure on the various administrations as well as the Congress to do something meaningful for the Blacks.

During the years of 1960s various factors helped in bringing the Black cause to the forefront in the American society. Among them were : (1) Complex international situation creating a favourable atmosphere for the Black cause. (2) The Well developed communication system that helped the propagation of the plight of Blacks all over the world, and its success in evoking due response from the African and Asian nations, and thus giving a set-back to the American relations with these nations. (3) The favourable decision taken by the federal judiciary in the well-known case of *Brown vs. Board of Education, Topeka, Kansas, (1954)* regarding school desegregation. (4) Montgomery bus boycott by Martin Luther King, Jr., and his non-violent direct action

tactics which could bring the Black and the White liberals together. This boycott helped integrate the bus system in Montgomery. (5) President Eisenhower's strong and positive action in the Little Rock High School desegregation which inspired the Blacks. (6) The United States Congress passed two Civil Rights Acts of 1957 and 1960. Although these Acts were mild and weak yet it was an encouraging development in the Blacks Civil Rights Movement. (7) Both the major political parties, i.e. the Democratic and the Republican parties, realised that the Black votes were affecting the result of Presidential elections. In view of the Black votes, they had to prepare liberal party programmes on civil rights. (8) The Blacks' coordination and coalition of various organizations to fight for their cause.

These forces and factors made the solution of the problems of the Blacks unavoidable and made it a dominant issue in the United States.

The late Black leader, Dr. Martin Luther King, Jr., steered the Black movement. Under his able leadership many Blacks and a significant number of the Whites led the way of non-violent direct action and registered their protest against the plight of Blacks in the American society. Consequently, this movement made the US Government do something concrete for the Blacks' integration, desegregation and their welfare.

The Presidential elections were due in the year 1960. Both the candidates of the major political parties Senator John F. Kennedy (Democrat) and Richard M. Nixon (Republican) supported the demands of the Blacks. But the Republicans were somewhat lukewarm in their attitude while Kennedy made his thrust towards their cause. Hence, in this election the Blacks overwhelmingly voted for Kennedy for their bright prospects.

At the beginning of the Kennedy Administration the Blacks were more hopeful of their demand for the grant of full equality in all spheres of American life. They, however, did not choose to wait for the Kennedy Administration to embark upon a civil rights programme on its own. The organizations of the Blacks such as the *National Association for the Advancement of Colored People* (NAACP), the *Congress of Racial Equality* (CORE), the *Southern Christian Leadership Conference* (SCLC), and the *Students Non-violent Coordinating Committee* (SNCC) jointly launched a massive struggle to attain their objectives.

President Kennedy supported Black's demands. Hence, he took several positive steps to eliminate segregation and discrimination in the

fields of education, housing, employment and public accommodation. He publicly declared his commitment to the Supreme Court's "desegregation decision". He appointed the Blacks to the highest positions as ambassadors, federal judges, commissioners, attorneys and secretaries.

The Justice Department under the charge of his brother, Robert Kennedy, intervened in the case of Prince Edward County, New Orleans, Tuscaloosa and other areas to make the claims of the Blacks upright and just.

Of course, during his Presidency, Kennedy had taken several positive steps to eliminate racial discrimination in the American society. But he did not send any Civil Rights Bill to the Congress due to the conservative nature of the Congress. He also did not want to antagonize the Congress. He required its support for his other programmes. However, in 1963, because of the rising Blacks' protest against racial discrimination, Kennedy sent the Civil Rights Bill to the Congress. Unfortunately, on 22 November 1963 Kennedy was assassinated. His removal from the Presidential post developed unfavourable and unpredictable situation in the Black Civil Rights Movement.

During his Presidency, he employed every weapon to eliminate segregation and discrimination, viz. litigation, negotiation, legislation, persuasion, executive orders, executive actions and directives in order to effect Blacks' integration. When judged in the context of his various press conferences and public lectures as well as concrete measures taken by his Government, his role was quite laudable.

The death of President Kennedy brought the Vice-President, Lyndon B. Johnson, to the office of the Presidency. As a Southerner, President Johnson's commitment towards the Blacks welfare programme was suspected by the Black and White liberals. Nevertheless, President Johnson at the beginning of his Administration promised to continue Kennedy's programme. He had also supported the Blacks' demands and their Civil Rights Movement.

The year 1964 was a Presidential election year. In view of Blacks cause, the election proved to be an important event. During the election campaign, the Democratic Party Presidential candidate, Lyndon B. Johnson, supported Blacks' demands, and had taken a liberal stand. On the other hand, the Republican Party Presidential candidate, Senator

Barry Goldwater, had taken anti-Black and conservative stand. In the context of the Blacks' welfare, Senator Goldwater's election to the Presidency, would have harmed Blacks' cause. Fortunately, Americans elected Johnson to the Presidency. In this election Black votes had also played an important role in electing Johnson. Thus the Blacks' Civil Rights Movement survived.

From 1964 to 1968, hundreds of racial riots occurred in America. The riots caused bloodshed, burning, looting and murder. The property damaged was in billions. These riots erupted only due to small or petty reasons. They were spontaneous and unplanned. These incidents provided enough proofs to find out causes and solutions. The riots occurred because of the worst conditions that prevailed in the Black ghettos. During this period, Black ghettos were over-crowded. There was no place for the children to play. Even dusty streets, parks, swimming pools were not there for escaping from intense heat and humidity of summer. Their welfare relief rolls were very costly. There was lack of medical facilities. The highest rate of unemployment prevailed.

On the other hand, in this critical situation the White segregationists violently reacted against Blacks' demands. During this period, the incidents of racially motivated crimes increased—murder, arson, mob or bomb attack on Blacks. Moreover, police used excessive repressive measures against the Blacks. However, State and Federal Governments were also apathetic and unsympathetic towards Blacks' cause. The Federal Government could have done something more for their upliftment in the American society. It had given legal equality to the Blacks through three Civil Rights Acts, but ignored Blacks' economic and social welfare programmes. These conditions and circumstances made Blacks bitterly angry and violent.

Johnson's Administration set up National Advisory Commission on Civil Disorders to investigate into the causes of the riots. This Commission blamed White racism, and recommended massive welfare programme to improve the "worst conditions" of the ghetto Blacks. The Commission in its exhaustive study of six months was convinced that America was a segregated society. It also identified the basic causes of riots which were unemployment, poverty, discrimination in housing and deteriorating Blacks' conditions. It recommended the ending of all racial discrimination and segregation. It urged the U.S. Government to create two million more jobs, improve the education for Blacks, build six million homes for lower income families and provide welfare

assistance to the poor. The Commission left no further excuse for postponement of these programmes. Another Commission that dealt with crime reported that the riots in the big cities were "not only an expression of hostility but a cry for help".

It was President Johnson who realized the intensity of the Blacks' problems. He wanted to launch various programmes for their upliftment. However, he wanted to get sanction for these programmes from the Congress. The Congress was, however, indifferent to these welfare programmes. For example, the 1966 Civil Rights Bill which dealt with fair housing, was filibustered to death. The Bill of 1967, to ensure equal opportunity in employment, had been quietly rejected. If Johnson wanted to improve ghetto Blacks' condition, this would have meant huge cost. This could mean additional taxes and required Congressional action and public support. When President Johnson sought more than \$ 6000 million for city renewal projects, the Congress gave him one third of that amount. It refused funds to subsidize the poor of the city and was unwilling to give federal aid for their education. Even President Johnson's rat-control Bill for slum areas was not passed by the Congress. That would have helped to rid the city Black ghettos of rat infestation.

The same Congress that killed the anti-rat Bill had exhibited an incredible indifference to the hardships of ghetto Blacks. This unsympathetic attitude to the Blacks' cause led to the emergence of the extremist group in the Black community. The group advocated violence against Whites.

The emergence of an extremist group among the Blacks was responsible for the explosive situation. It meant more racial riots. In view of the racial riots, the Congress hastily passed the anti-riots Bill. The Act aimed at stopping Blacks' extremism. It increased the penalties for those who incited the violence. Moreover, all over America, the police were preparing for combating the racial riots. It meant that the Federal Government was prepared to kill Blacks rather than solving their problems. President Johnson thus faced several limitations in launching any economic welfare programmes for the Blacks because of the unsympathetic and reluctant attitude of the U.S. Congress and some White Americans.

Moreover, President Johnson's Administration had already passed three comprehensive Civil Rights Acts of 1964, 1965 and 1968. President

Johnson played an important role in persuading the Democratic Party members and the opposition leaders in the Congress. The Southerners were determined to defeat the Bills in the Congress. However, Johnson made their efforts ineffective. By seeking skillfully the public support for the Bills he showed his political shrewdness in managing the Congress. After passing these Acts, he had also used every means of his Administration to implement them. Hence, he took several steps to eliminate segregation and discrimination in the field of education, housing, employment and public accommodation. He appointed the Blacks to the highest positions as ambassadors, federal judges, commissioners, attorneys and secretaries. In fact, in many respects Johnson's Administration, both in word and deed, had done more for the Blacks than any other administration in the preceding years.

In the context of Blacks Civil Rights Movement, the role of the Black organizations must not be ignored. During this period, there were a number of important racial and biracial organizations struggling for the rights of the Blacks. The leaders included Roy Wilkins, Director of the NAACP ; Whitney Young, Jr., Executive Director of the National Urban League ; James Farmer, National Director of the CORE ; Rev. Martin Luther King, Jr., President of the SCLC ; James Forman, Executive Secretary of the SNCC. These five men were known as the Big Five. They were captains of the most vigorous organizations. These organizations differed in their history, methods and means, and yet they fought unitedly for the Black cause. They led the battle for freedom. These organizations adopted non-violent direct action as their method of struggle. They developed different techniques of protest to sharpen the movement i.e. freedom rides, marches, courting arrest for being jailed, boycotts, picketing, prayer vigils, sit-ins, kneel-ins, legal action, voter registration and mass meetings.

The peaceful way of passive resistance produced no effect on the White segregationists. They violently attacked the Blacks and strongly opposed their demands. Moreover, the Southern States had taken anti-Black stand. The peaceful Black demonstrators were subjected to face all kinds of indignities such as police brutality i.e. fire hoses, cattle prods, and police dogs. They were jailed and beaten, tortured, murdered and bombed. It was a mockery of the non-violent movement. This kind of violent and negative attitude of the Whites towards Blacks created an atmosphere of animosity between the two races. The Blacks had also begun to doubt the relevance of non-violent direct action in their struggle. These developments led to the emergence of extremist group in the Black community. The group included SNCC, CORE and

Black Panthers. The group advocated violence against Whites, rejected gradual change and integration, expressed greater community self-reliance, self-defence and rejected the coalition of Blacks and Whites in their struggle. The group encouraged Blacks' culture and opposed continuation of US war on Vietnam. It had also demanded separate nation in America. On the other hand, the NAACP, Urban League, and the SCLC denounced violence and separatist trend.

Another development among the Blacks was the rise of an extremist group called the Black Muslims. This group rejected integration and Christianity, advocated self-help, demanded separate Black nation in America. It also opposed the US war on Vietnam.

The Black organizations had also confronted among themselves on the question of the continuation of the US war on Vietnam. About the war most Black leaders believed that much of the military budget affecting President Johnson's domestic and Blacks' welfare programme. On the issue of war in Vietnam, the Black organisations SCLC, SNCC, CORE and Black Muslims opposed the war. And the NAACP and the Urban League preferred to remain neutral.

In this way, the Black organizations confronted among themselves on various issues like the method of struggle, the use of tactics i.e. extremist or moderate; integration or disintegration in the American society; Blacks separate nation in America; war on Vietnam and religion. To sum up, in early 1968, the coalition and coordination among the Black organizations collapsed completely. It also damaged the cause of their progress and welfare.

But the progress achieved either in terms of attracting the world attention to their cause or the concrete gains attained from the U.S. Government were a sufficient illustration of their success in the American society.

Geographical Perspective or Habitat, Economy and Politics of Kurdish Area

A.S. Dalvi

Sup: Prof. R.C. Sharma

Kurdistan, a mountainous area in West Asia, transcends political demarcations and stands as a unified cultural unit, mostly inhabited by Kurds. It has been a constant irritation for the nation states of Iran, Iraq and Turkey which have apportioned it politically. The population of Kurdistan is about 9.45 million (1981), spatially distributed over the countries i.e., 4.463 million in Iran, 1.805 million in Iraq and 3.188 million in Turkey. However, there are 0.25 million Kurds in Syria and little in the USSR.

Kurdistan is not a recent problem which confronts the present political syndrome, but it has prolonged and survived through many centuries and the factors responsible for it are many and varied but categorically they are either transnational within the geographical milieu or have attained international overtones. International forces and processes in 20th century have played havoc in this case. The local powers acted at the behest of international agencies and even the present political leadership of the three major constituting nation states is playing on the same symphony controlled by the powers of the world.

Kurdistan (latitude 32°20' N to 39°50' N 39°42' E to 48°48' E) with its present geographical area of 284413 sq. kms and the total population of more than nine million cuts across Iran, Iraq, Turkey, Syria and USSR, but in the present study Syria and USSR are excluded for obvious reasons that Syrian and USSR territories are of marginal Kurdish nature. The present geographical delimitation is being done primarily on the basis of percentage distribution of population speaking Kurdish language as well as the supporting historical evidences. However, it was a difficult exercise to arrive at exact demarcation of these boundaries.

The present study "Geographical Perspective on habitat, economy and politics of Kurdish Area" aims to study some of the vital aspects of the regional structure of Kurdistan in order to focus on its habitat and economy which have direct impact on the politics of the region. It has three main aspects—habitat, economy and politics of Kurdish area. The subject matter is divided into seven chapters in addition to Introduction in the beginning. Introductory part deals with the demarcation and delimitation of Kurdish area. The demarcation has been done on the basis of historical evidences, geographical and ethnic extent and the present spatial distribution of Kurdish population. It has been observed that geographical natural boundaries are almost coterminous with the ethnic spread out of Kurdish population. There has been substantial impact of the natural barriers on the movement of population. Zegros mountain ranges and the lake Uirmia put limit to distribution of Kurdish population. In the North-west and west the chain of Divigir-Erzurum-Kurs mountains serve as a natural boundary between Armenians and Kurds. And in the south and south-west, the course of river Tigris put limit to the Kurds' migration. The present study area comprises of nine provinces of south-eastern Turkey, four northern provinces of Iraq and three western provinces of Iran and is being taken a typical Kurdish homeland with all its natural and socio-economic characteristics.

First chapter deals with the geographical framework explaining the details of geographical features of area, such as physiography and drainage, climate, soils and natural vegetation. These aspects are responsible for the development of the personality of the region. Physiographic structure of Kurdistan is very complicated and it is being analysed here with the help of million sheet maps. Physiography of Kurdistan is very rugged and highly fragmented with mountain ranges and deep valleys and gorges. The northern part of Kurdistan is topographically highest, having average height more than 2000 m. The southern part of Kurdistan is lowest having average height below 100 m. Mountain Zagros is the main feature of Kurdistan. Lake Van and Lake Urmia, two big water bodies, are prominent and attributed product to the tectonic movement. Considering the physiographic feature, Kurdistan is being divided into four physiographic regions, i.e., Land of Armenia in the north, Zagros mountain ranges in the central and eastern part, high plains of Lake Urmia in the north-east and Tigris river basin in the south and south-west. Along with rugged topography, the harsh climatic conditions of Kurdistan have made life very difficult. In the summer temperature rises above 47°C in the valleys and in the winter it goes down below—20°C. More than half of the Kurdistan

area remain under snow for three to four months, not important for any economic activity. The physiography plays a dominant role in shaping the Kurds life and leaves great impact on the man and environment relationship and the development of economy.

Second chapter deals with the historical perspective on Kurdistan from its antiquity to the present period. It enables to understand the political relationship between Kurds and other communities who came into their contact. Geographically, Kurdistan is a negative area because of its uneven terrain and harsh type of climate. Therefore, the region has remained isolated throughout its history. Hence Kurds developed separatist attitude and love a free natural life. But the imperialist forces interfered in Kurds life and utilised them to achieve their own goals. Kurdish cavalry and oil resources are two main factors to attract foreigners. Different power forces came into contact in Kurdistan territory, which ultimately fragmented artificially to ensure their interest.

Third chapter deals with the demographic aspects of Kurdistan. It examines the distribution pattern and trends of Kurdish population and their socio-economic characteristics. Data have been collected from various sources and analysed with the help of quantitative and cartographic techniques. However, the nature of data has deterred from using the sophisticated techniques. The growth and distribution of population in Kurdistan remained to be uneven. Agriculturally and industrially better developed provinces have high growth rate with dense population cover. Urban centres are few but not developing fast, due to the reason of having poor linkages with the rural areas. Kurdistan has four big cities having population more than 100,000. Socio-economic conditions are not satisfactory. More than seventy per cent population is illiterate, which directly affect the socio-economic development trends in the area.

Fourth chapter examines the resources, their potentials, levels of development and the economy. It also analyses the prospect for future economic development of Kurdish area and the people. Kurdistan area has a resource base but because of complex physiography, unsuitable climate and poor infrastructure it is regarded less endowed area. Seventy per cent of population of Kurdistan is engaged in agriculture sector. The rest of urban population is engaged in trade, services and craft work. Sixty four per cent of total income comes from agriculture sector. Stock rearing is the major occupation of Kurds. Wheat is the major occupation of Kurds. Wheat is the major crop in Zoanian and

Iraqi part of Kurdistan, whereas, millet is prominent in Turkish Kurdistan area. Kurdistan has immense water potentials which if harnessed could lend great help to the development of agriculture and hydro-electric power. Better use of water potentials is done in the Iraqi part of Kurdistan, which produces substantial amount of food grains for the requirement of Iraq. Due to poor transport network the economic development of the region has lagged behind.

Fifth chapter deals with the question of Kurdish autonomy and the regional response. This chapter deals with Kurdish nationalism, their political movement and the political processes which have shaped the development. Kurdish nationalism has a long history, and inspite of oppression of Kurds, their nationalism not only remained intact but also strengthened by the rebellious Kurds. In the beginning of the 20th century, Kurds nationalism was in its full swing, but they could not achieve their goal. Inspite of last sixty years of oppression and consolidation of nations, i.e. Iran, Iraq and Turkey, Kurds remained heterogenous group.

Sixth chapter places focus on international agencies, factors and forces which have played very prominent role in shaping the complex issue of Kurdistan. It examines the forces of the present contemporary world order and envisages a political solution to this age-old tricklish problem of Kurds. The pertinent focus is on the super powers and their activities of political game in the context of Kurdistan. The geographical compulsion alongwith ethnic characteristics have given a paramount strategic importance to this area to become a complex issue. The upshot of all this is that the Kurdish people remained underdeveloped inspite of natural endowments.

The last chapter examines Kurdish autonomy, related problems and prospects. In this concluding chapter, a theoretical framework is being proposed in the light of the Unified Field Theory of S.B. Jones. Seeing the overall situation in Kurdistan, it can be asserted that, Kurdistan region epitomises the end products of the geographical, socio-economic and political structure in its enigmatic personality. The economy, society and polity being underdeveloped in character, however, this should not be the case within the givengeo graphical situation, specially pertaining to its endowments, both natural and human.

Geographically, autonomy is a desirable thing and it should be welcomed, but politically, it is difficult to achieve. The regional and international forces should help in developing an atmosphere which could usher in a situation of peaceful settlement.

Defence and Development : A Study of India's Maritime Strategy

Kishore Kumar

Sup : Dr. M. Zuberi

The increasing complexity of political and economic interaction among nations, development and deployment of sophisticated weapons system and ever-increasing arms trade have made the security environment very dangerous today. But at the same time defence preparedness makes heavy demands on resources, both material and human. That is why the budgetary aspects and resource allocation to the defence sector have become an important field of study in the last few decades. The political economy of defence is thus the prime concern of all nations today.

This thesis attempts to analyse the interaction between defence and development with special reference to India's maritime strategy. This interaction is best exemplified in the maritime strategy as the oceans represent new threats to our independence and territorial integrity as well as tremendous economic opportunities for development. That is why maritime policy today constitutes an important component of foreign policy, security policy and resource policy. Advances in ocean science and technology will no doubt enhance its importance in the coming decades.

No country can afford to ignore the ocean surrounding it and the new opportunities it offers. This was realised in India in recent years, and the creation of the Department of Ocean Development as an apex body to coordinate India's maritime activities is a significant pointer in that direction. Marine activities no doubt constitute an important aspect of public policy. But its development into a field of academic research and university debates can also create a different level of awareness among the youth of India which will, in turn, determine the success of the policy.

This thesis was written not with an intention of making it a sort of specialists job, but to raise some pertinent questions rather than answering them. In other words I would consider my effort successful if it succeeds in generating a debate and further research. The methodology of research in this case is descriptive as well as analytical. The main source of information has been published literature : government documents, parliamentary debates, United Nations publications, books, articles in learned periodicals and newspaper reports. Informal discussions with some serving as well as retired officials, including those in the defence services, have also helped in clarifying some critical issues pertaining to the subject. This study does not attempt to make a statistical analysis; it is merely an attempt to take stock of new developments in the ocean area, and to point out their significance with regard to our defence and development strategies.

The first chapter starts with the well-known debate as to what effect defence preparedness would have on the developmental programmes of third world countries, India in particular. For a long time defence was considered to be a non-productive activity which made competing demands on resources which could well be utilised in other developmental projects. But this viewpoint underwent drastic revision after the orthodox development theories of the 1950s and 1960s were challenged. Development was no longer considered as a matter of only resource mobilisation and an index of production. The new concept of development which emerged in the late 1960s and 1970s urged for more democratisation and participation in the economic processes of the countries striving for development. There emerged a new concern for human welfare, environmental protection and constructive uses of science and technology. Resources are not only those which have immediate use in the production process but also those which make the earth livable. They all have to be preserved and properly utilised.

The second and third chapters deal with the strategic environment in the Indian Ocean area which has played a very significant role in the security as well as developmental prospects of India through centuries. Till very recently the strong maritime powers used sea-strategy for political and economic subjugation of resource-rich but militarily weak countries. The Portuguese, the Dutch, the French and the British vied with each other for the command of the Indian Ocean area. The Europeans had far superior naval strategy as well as weapons systems. The small Indian kingdoms in the coastal areas put up stiff resistance for years but were defeated for the abovementioned reasons. Among the European powers, too, there was a long struggle for supremacy after

which Britain wrested the control of the area from the other European powers. It gradually eliminated the other foreign powers from the region, but for small enclaves in some coastal areas. Thereafter, Britain set out on the task of total economic control of India. For more than two centuries, its economy thrived at the expense of the Indian subcontinent. The British naval mastery has been the most fitting example of maritime power and economic prosperity.

The shrinking of the British empire and its withdrawal from the Indian Ocean was by no means an end to foreign military presence in the region. Though colonialism came to an end, the economic and strategic importance of the Indian Ocean region was even more enhanced due to strategic oil routes, the discovery of new resources and the increasing trade and commerce through the area. The third chapter discusses the contemporary military activities in the Indian Ocean area which heighten the security threats to the littoral and hinterland countries in the region. After the Second World War, the United States emerged as the strongest military and economic power in the world. By then the world was also divided, at least among the developed countries, on ideological lines. The United States assumed the responsibility of defending its allies and their interests all over the world. In the Indian Ocean, its military presence is justified for defending the oil-routes for West Europe and Japan from a possible Soviet attack. The acquisition of bases in the Indian Ocean, including air and naval facilities, deployment of sophisticated submarine-launched nuclear missiles, and new command, control and communication systems are all geared to defend the combined Western strategic interests. Some of the allies of the United States are also enhancing their naval capabilities in the Indian Ocean area, thus complementing the US presence here. The Soviet Union has also responded in the same fashion, albeit without visible presence like base facilities and so on. It has largely placed mooring buoys which are being used by its naval vessels. The Soviet Union matches the Western presence in no uncertain terms, and poses a strong deterrence to the latter.

External military presence in the Indian Ocean area has added to the security problems of India and other littoral countries which are already disturbed by the colonial legacy of border disputes and distribution of resources. It raises the problem of intervention in local conflicts, as was witnessed during the Indo-Pakistani conflict of 1971 and the Arab-Israeli war of 1973. Some of the littoral countries have helped in aggravating the already tense situation by giving base facilities to external powers in return for sophisticated arms and economic assistance.

This has created obstacles in the way of convening of meeting, under the auspices of the United Nations, for the purpose of declaring the Indian Ocean area a zone of peace. All kinds of excuses have been put forward by external powers for the continuance of their military presence in the Indian Ocean, but it has to be realised by the countries of the region that a zone of peace is the essential pre-requisite for their economic and social development.

It should be remembered that military strategy is a tool for gaining control of the economic potential of the Indian Ocean and its littoral. The countries of this region have finally realised as to what role the oceans play in the process of development. For centuries, they were used only as a route to the landmass, for naval warfare and for the exploitation of the fishery resources. But as man overcame the technological barriers to entering the sea-depth, he discovered many more resources and uses of the sea. A country like India which has a large sea frontier has at its disposal in alternative to those strategic resources which are fast depleting on land. The discovery of oil and gas, strategic minerals, useful plants and weeds, chemicals and alternative food resources in the seawater, seabed and the subsoil have revolutionised the role of the oceans in the process of development. The creation of the Department of Ocean development, the pioneering role of the National Institute of Oceanography, the expeditions to the Antarctica and the ambitious sea-bed mineral programme, all point towards the seriousness with which the Indian government is considering its ocean policy. The scientific and technical institutions like the Council of Scientific and Industrial Research, the Indian Agriculture Research Institute, and academic institutions like the Indian Institute of Technology and the Andhra University are also playing significant role in India's ocean programme. The government has also created a Coast Guard Organisation which defends our interests in the ocean area, with an effective support by the Indian Navy.

The pace of new discoveries regarding the uses of the sea have become faster than our ability to agree on a just and equitable distribution of new resources. In the colonial period the world ocean was divided among a few powers who were mainly concerned about the control of their colonies. After decolonisation the number of sovereign countries increased manifold and hence the distribution of resources was further complicated. A similar problem arose when new resources were found in the sea, and the economic and technological viability regarding their exploitation was established. Some strategic minerals were found in the deep sea beyond the jurisdiction of any country. The

question arose as to who had the right to exploit them. The advanced countries which had the required capital and technology, asserted their right to exploit them first. But a vast number of developing countries, lacking both funds and advanced technology, insisted on the exploitation of ocean resources by consensus, sharing the resources and technology. A convention on the Law of the Sea was adopted in 1982 which made provisions for equitable access to resources and technological know-how. The convention has met with strong opposition by some developed countries which insist on their exclusive rights. If they decide to use force in their bid to exploit the ocean resources unilaterally, the world might witness 'resource wars' in coming decades.

The military activities of external powers and their pumping of sophisticated arms into the Indian Ocean area has made the security problem of local countries very acute. A country like India which has long land and sea frontiers cannot, therefore, afford to ignore its defence. The acquisition of armaments and other equipment is very important to keep our armed forces in readiness. Arms are acquired by various methods : direct purchase and indigenous production either under licence or through indigenous design and development. India has resorted to all these methods of arms acquisition, depending upon the level of sophistication of the equipment and our own resources, including technological know-how. Thus if we are purchasing submarines and sophisticated aircrafts, there is also indigenous production of frigates and other small crafts. Whatever the mode of acquisition, the movement towards self-reliance is considered the top priority in our defence programme. With increasing utilisation of our own resources and skills, the problems regarding military strings and future supplies of arms can be effectively overcome.

Defence industries are but a part of the total economic infrastructure of India, and hence they cannot operate in isolation. In modern warfare, all the resources of the country have to be geared to the total defence efforts. Civilian industries contribute substantially to production in the defence sector. If we see the history of industrial development in India, or for that matter anywhere in the world, defence and the civilian industries have developed side by side, complementing each other in the task of national development. The role of industries like iron and steel heavy engineering, power generation, machine tools, transportation and communications, chemicals and materials and so on, need not be overemphasised with regard to defence needs. Similarly, defence industries also contribute to the civilian sector by imparting new technologies and products. India has to fully utilise these linkages for its balanced development and technological self-reliance.

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The thesis has the following chapters :

- Chapter I Defence and Development : A Perspective
- Chapter II Strategic Environment : A Historical Survey
- Chapter III Strategic Environment : Recent Developments
- Chapter IV Ocean in Development
- Chapter V Arms Acquisition
- Chapter VI Defence and Civilian Production : The Linkages
- Chapter VII Conclusions.

Appendices contain data on defence expenditures, production and import of weapons, and other related matters. These appendices, as well as the maps supplement the text of the thesis.

The Nuclear Non-Proliferation Treaty and the Threshold Powers : A Study of India's Attitude

O.N. Shukla

Sup : Prof K.P. Misra

The Nuclear Non-Proliferation Treaty (NPT), which was adopted by the United Nations in June, 1968 after four years of sustained negotiations, had been described as the first international agreement designed to control the process of nuclear proliferation. It was widely welcomed as the first historic agreement of post-Second World War era concluded within the framework of nuclear arms control and disarmament (NACD), for which the mankind had been aspiring for ever since the advent of nuclear age.

The preambular professions of the NPT and its provisions claimed to control the problem of nuclear proliferation and dissemination of nuclear technology without interfering in with the recognised rights of states for the peaceful uses of nuclear technology for developmental purposes. The wide endorsement of the NPT by many states which enabled its early application as international treaty arrangement raised the expectations of the gradual realisation of the goal of NACD. The behaviour of France and China—the other two nuclear weapon states (NWS) also demonstrated that they would be guided by the NPT norms without becoming its formal members. This further reinforced the belief that possibly a credible non-proliferation regime has come to exist.

The doubts regarding the viability of the NPT, however, had come to exist simultaneously when it was being negotiated in the fora of the United Nations and the Eighteen Nations Disarmament Committee (ENDC). The decision of India not to subscribe to the NPT had in particular raised fundamental questions against the claims of the NPT as a nuclear arms control (NAC) measure and its efficacy to control the problem of nuclear proliferation. For some students of international

relations and nuclear strategy India's response to the NPT has been quite intriguing in view of its unblemished record as a protagonist of the policy of the NACD since 1947.

The analysis of the attitude of India on the NPT by a set of students, however, characterized it as a distinct shift from its policy to the NACD which had traditionally underscored the need of international cooperation in this realm. This shift was attributed to the dominance of nationalistic considerations of security and development on India's decision making during the mid-1960's. India's pleas for the vertical non-proliferation and its insistence on the application of the principle of mutual balance and obligation between the nuclear and non-nuclear weapon states were described as a maximalist position which India deliberately adopted during the NPT negotiations in order to preserve its right to exercise nuclear option to meet impending security challenges.

This study "The Nuclear Non-Proliferation Treaty and the Threshold Powers : A Study of India's Attitude", has addressed itself to this question as to which were those factors that accounted for India's anti-NPT attitude. In precise terms, this study is a systematic exposition of the shaping of India's attitude towards the NPT, which had taken place during the period of the NPT negotiations. It is undertaken in seven chapters including conclusions, with specific objective to underline, if there has been a shift in India's policy of the NACD during 1964-68 as alleged by certain quarters. Whether the nationalistic considerations of security and development were actually consequential factor in shaping India's response to the NPT. To what extent its plea for vertical non-proliferation and mutual balance of obligation was merely declaratory.

The delineation of the Problem of Nuclear Proliferation and its Genesis, Nature and Consequences which is dealt in a historical perspective, has underlined that the problem of nuclear proliferation, had come to exist with the introduction of nuclear weapons in international politics. The scientists, who were engaged in acquiring nuclear weapons for the United States, were able to perceive the various emerging dimensions of this problem. They had cautioned the U.S. decision makers about this. The inability of the United States, however, to appreciate the novel dimensions of this technology, and to view it only as a weapon of higher yield had set into motion the process of nuclear proliferation.

The U.S. decision to use atomic weapon for politico-strategic purposes not only underlined the significance of this weapon for security purposes but also made its possession a necessary condition for political and physical survival for the nations desirous of playing an active role in international politics. The Soviet Union's decision to acquire nuclear weapon capability in 1949 was, therefore, clearly motivated by the concern of security. The US atomic capability was perceived as a direct security threat as America had viewed the fascist atom bomb as a threat to its own security. Similarly the decision of the United Kingdom, France and China in later years were also motivated by the concern of security, status and political independence, which in the literature of nuclear proliferation have been characterised as the incentives to go nuclear.

As the proliferation of nuclear technology was simultaneously going on in various other countries for peaceful purposes, it was believed that a new phase of the spread of nuclear weapons was in the offing. Since a few of them had acquired the capacity to produce nuclear weapons, the belief of some writers in the deterministic play of these so-called incentives in shaping the decision for the acquisition of nuclear weapons led them to hold the view that the acquisition of peaceful nuclear technology would inevitably lead to the nuclear spread. By implications this set of writers did not concede the possibility of any distinction between the peaceful and non-peaceful atom.

Starting with such understanding of the dynamics of nuclear proliferation, the need for an urgent international regime was argued by the official and non-official sections of the NWS particularly in the United States. As any further addition to the membership of the nuclear club in their perception was bound to create more complications for international crisis management and the system maintenance for these two nuclear powers, Britain's efforts to acquire minimum deterrent was viewed by them as the beginning of the problem of nuclear proliferation.

It is, however, revealed by this study that [by pleading for a complete ban on further expansion of nuclear club the NWS had shown a particular preference for a typical approach for the maintenance of international peace and crisis management which legitimatised the possession of nuclear weapons only by some states and not by others. In a way, the super powers pleaded for the perpetuation of a kind of nuclear hierarchy.

By pointing out the consequences of nuclear proliferation, the analysis has also underlined their wrong belief that all the states which have acquired technological capability would compulsorily join the nuclear club. The developments in the areas of the peaceful nuclear development programme would not be an inevitable march towards the acquisition of nuclear weapon. The review of the incentives to nuclear proliferation and enquiry into the emergence of the category the threshold powers has indicated that their understanding of the problem suffered from certain basic misconceptions.

The basic flaw of this perspective, which now seems to be more deliberate than indicating the lack of their understanding of the problem, had been the reluctance of the NWS to admit the possibility of distinctions between the nuclear technology for peaceful and non peaceful purposes. Secondly, they believed that all the nations might view as a rule the nuclear weapons as a necessary element for enhancing security and status. Thirdly, the role of global political forces and the basic foreign policy orientations of the country concerned in the decision to acquire nuclear weapon was deliberately underplayed by them.

The re-examination of the advantages to acquire nuclear weapons have also made it evidently clear that the claims of nuclear weapons to provide for national security, status and prestige are of dubious value. By remaining on the nuclear threshold for all these years, India has provided empirical evidence to reject the contention of the super powers on nuclear proliferation. It has on the contrary tried to establish that the non-nuclear status with commitment to the approach on nuclear disarmament could be a preferable strategy for national security in the contemporary world.

During the NPT negotiations India as a threshold power, pleaded for a unified approach on nuclear non-proliferation. India argued that our concern should not be only with the control and management of the problem of proliferation but to reverse and gradually eliminate it. India's refusal to exercise nuclear option despite having capability and the compulsions to go nuclear, clearly reflected its resolve to promote an alternate approach to international peace and security which defied the rationality of deterrence system based on nuclear weapons. Unlike super powers it did not view the danger inherent only in the horizontal proliferation rather it was insisted that the vertical proliferation was the real source of insecurity which might lead to future proliferation.

India has, thus underlined the need for the beginning of positive movement of NACD by making the NPT as its first step. The threshold

power status in this context was used as a bargaining counter to draw the superpowers' commitment for positive arms control which could atleast provide a thaw in the nuclear arms race.

The gradual emergence of the idea of nuclear non-proliferation as a distinct approach during 1958-64 indicated the possibility of an agreed position with regard to the scope of the non-proliferation agreement. The NNWS had not felt at this stage that the emerging non-proliferation agreement of the super powers would be totally indifferent to the idea of nuclear arms control and mutual balance of obligations which was later pleaded by the NNWS.

The super powers' concern with the problem of nuclear-sharing and control in determining the scope of non-proliferation gradually made it evident that in view of their global concerns they would be interested primarily in the management and control of this problem than undertaking any obligation towards the NAC. In order to protect itself against these eventualities India, therefore, worked for the passage of the "Omnibus Resolution" and the "UN Resolution 2028" which became the documents of the international consensus on nuclear non-proliferation. Not only had it indicated the general concern of international community towards nuclear non-proliferation rather it clearly stated the basic guidelines for the negotiation of the NPT.

Realising the significance of non-proliferation for nation's decision making India pressed forward the basic issues which concerned the NNWS in its proper prospective. It argued that the NPT must be a positive step towards NACD; that there must be the adherence to the principle of mutual balance of obligation; that it must not be discriminatory treaty; and that security guarantees be provided to the NNWS. No doubt these efforts of India were widely appreciated by the NNWS belonging to the alliances yet it could not succeed in organising the NNWS as a grouping to exert political pressure on the NWS despite the general appreciation of India's stance.

The analysis of India's stance on the major question pertaining to the NPT viz., the question of nuclear arms control, the security guarantee, the peaceful uses of nuclear energy and the Nuclear safeguard which it had so ably articulated during negotiations, however, suggest that its strategy to react to the proposed formulations of the super powers had not helped India much either politically or diplomatically. Moreover, as the super powers had become votary of a particular view on non-proliferation which placed greater premium on the role of nuclear

weapons it was desirable on the part of India to place its own views as parallel to the super powers' view with the inception of actual negotiations.

However, it could not be denied that in accordance with its commitment to the policy of NACD, which allowed for the pursuance of the low posture strategic doctrine for the management of the problem of the nuclear proliferation, India contested super powers' prospective during the NPT negotiations. In this endeavour India's views on the problem of nuclear proliferation were not being influenced by the partisan considerations.

India was, however, quite successful in articulating the various issues pertaining to the NPT in proper perspective. It was agreed at the outset that the NPT would be a positive arms control agreement which would gradually help to contain the menace of nuclear proliferation without impairing the security of any country. The nuclear non-dissemination concept sought to impose the ban on both the vertical and horizontal proliferation but without endangering the development of nuclear technology for peaceful purposes. The specific arms control approach as incorporated in the NPT was, however, a serious deviation from this approach. The articles I and II of the NPT which specify two different sets of obligations for the NWS and NNWS respectively had indicated that the nuclear proliferation *per se* was not the concern of the NPT. The obligation of non-dissemination undertaken by the NWS did not add any thing new towards the creation of durable non-proliferation regime.

The attempt of the pro-NPT States to reduce this discrimination by the inclusion of specific obligations for themselves under a separate article VI of the NPT did not improve the situation. Their refusal to include any tangible arms control measure in the NPT to be undertaken by them in future or to accept this as a legal obligation made it evident that their objective had not been the creation of a durable non-proliferation regime which could cater to requirements of international security. The purpose of their arms control policy appeared to be to consolidate and strengthen the existing *status quo* and to seek legitimacy to the specific use of the nuclear weapon for the maintenance of the international system based on nuclear deterrence. The analysis of the NAC provision in the context of its security role had made it evident that the perspective enshrined in the NPT was the product of the so-called infallible rationality of the bipolar system, which sought to place all the constraints only on the horizontal proliferation. Obviously, it failed

to evoke India's appreciation and acceptance since it was based on wrong assumptions regarding the role of nuclear weapons in the contemporary international politics.

The other provision of the NPT which further strengthened the anti-NPT attitude of India was the question of security guarantee. It was widely believed ever since the inception of the NPT negotiations, that the NNWS particularly those countries faced with serious security problems would be provided with some kind of security guarantee against the nuclear threat and blackmail in exchange to the ban on their nuclear option. India, in particular was conscious of the need for some kind of guarantee system as it was surrounded by the two adversaries alongwith the threats of intervention from outside powers. Within the country it was vociferously demanded by a section of elite whether it was not the time for the review of the nation's security policy.

The discussion has underlined that during 1964-66 serious efforts were undertaken by the India's decision makers to assess the feasibility of various security alternatives. The quest for credible security guarantee system was one of such alternatives which was seriously viewed. At no point India had, however, made any serious policy proposal because the situation inside the country was highly indecisive. Moreover, it had realised that treading on the new path, which was a complete break from the security policies of the past, would only add to the problem. The faith in the efficacy of the policy of NACD non-alignment as the component of India's security strategy was reasserted. By firmly declining to admit any shift in India's nuclear policy, the utility of the traditional policy of NACD as the only relevant approach for peace and security was underlined.

India's support to the Kosygin proposal of "No-use of nuclear weapon" against the NNWS and insistence on the inclusion of the positive nuclear arms control measures in the NPT indicated that India's preference was for the non-militarist security policy. It is in this context one could understand as to why the UN Security Council declaration and the Unilateral Tripartite Declaration of the NWS designed to provide for the security of the NNWS party to the NPT were opposed by India. Since it had underlined the desirability of the use of unclear weapons as the insurer of security, it eroded the basic premise of India's non-proliferation policy which had sought to limit the use of unclear weapons. Moreover, by circumscribing the right of a state to evoke U.N. Security provision against the nuclear threat as conditional

to one's membership to the NPT system had further revealed that the objective of the security guarantee system of the NPT was not so much to provide for the secure world order but to perpetuate the iniquities and discrimination by sustaining hierarchies in international system.

The provision of nuclear safeguards and control and the peaceful uses of nuclear energy of the NPT also underline the discriminatory orientations of the treaty. The nuclear safeguard as a mechanism was initially conceived to help minimize the problem of nuclear proliferation and to achieve the goal of nuclear disarmament. India has remained a consistent supporter of this view of nuclear safeguard system. It held the view that these measures should not be unnecessarily intrusive and discriminatory. They should uniformly apply to those facilities in all the countries which contribute directly to the problems of nuclear proliferation. With this perspective India had participated in the conference for the formation of the IAEA statute and its various other meetings. India was aware of the techno-economic implications of these measures. It was, therefore, particularly cautious to protect its own interests vis-a-vis the advanced nuclear powers i.e. the United States who could use it for their own advantages in total disregard to the aspirations and the requirements of NNWS.

For this reason, as soon as this issue was raised during the NPT negotiations, India pleaded that it should be dealt separately under the IAEA system. In view of the insistent attitude of the United States to make nuclear safeguard provisions as integrated part of the NPT, India formulated its nuclear safeguard policy within the broad parameters of the NACD with the explicit plea for its uniform application on the NWS and the NNWS alike. India argued that these measures should not unnecessarily interfere with the peaceful nuclear activities of a NNWS. What is noted that on this issue again India was pleading the case for vertical non-proliferation by insisting upon the NWS to undertake equal obligations towards the nuclear safeguards. India argued that it would help to improve the environment which was being haunted by the fear of nuclear theft, nuclear terrorism and technological mishaps. Moreover, the uniform application of nuclear safeguards would help to mitigate some of the discriminatory aspects of the NPT and also help to mitigate the apprehensions of techno-economic hegemony of the NWS.

The discussion on the provisions of the peaceful uses of nuclear energy (Article IV), and the management and distribution of the benefits of the PNE technology (Article V) have also underlined that these were designed to consolidate the techno-economic hegemony of the NWS.

It is a known fact that India's interest in PUNE had begun at a time when other powers were engaged in procuring the nuclear technology for the weapon purposes. India was engaged in harnessing this technology for power generation purposes in which this country was particularly deficient.

India's decision makers had realised that the dependence on the advanced powers for technological help might lead to political subordination and techno-economic exploitation. It might also bring in the neo-colonialism from the back door. The efforts of India's nuclear policy planner since the beginning had been, therefore, to achieve self-reliance in this field. By accepting the CANDU technology as most suitable for Indian conditions at the time when its efficiency was at experimental stage, the Indian scientific elite demonstrated tremendous foresight and accumen in developing self-reliant nuclear programme of India without any serious constraints of nuclear safeguard and control system.

However, as India's independent technological capability has been sufficient to acquire nuclear capability, if it so desired, certain sections alleged that the India's nuclear programme suggested an implicit orientation towards the acquisition of nuclear weapon capability. The analysis of the PUNE policy of India has, however, demonstrated that its peaceful nuclear programmes is not meant for the non-peaceful purposes. India's nuclear development programme has demonstrated that the peaceful uses of nuclear energy were far more useful than it was for the weapon purposes.

No doubt the NPT has acknowledged the right of the individual states to conserve nuclear technology for the peaceful uses and insists that the advance nuclear powers must cooperate with the NNWS in the development of peaceful uses of the nuclear energy. In reality, however, these were so circumscribed that it raised serious apprehensions.

The analysis of the nuclear cooperation programme of the past have clearly revealed that the techno-economic considerations of the donor states were the dominant ponderables in shaping these agreements. India, therefore, argued that firm juridical commitment on the part of the NWS could only satisfy to the NNWS as their stakes in the peaceful uses of nuclear technology were no less significant. Mere statement of the intentions of the nuclear powers to cooperate in nuclear technology development in the exchange of the right of the NNWS to carry out independent nuclear technology developments was viewed as inadequate and unfair.

The unrelenting attitude of the NWS, however, made India convinced that it was a deliberate effort to maintain their technological hegemony and to perpetuate iniquities in the techno-economic field. The maintenance of nuclear oligopoly and the protection of economic and commercial benefits were the sole motive that led the NWS to fabricate such provisions of nuclear cooperation.

The analysis of the provisions of the management and control of the technology of PNEs have also pointed out the similar orientation. By including the PNE as a forbidden thing for the NNWS like nuclear weapons in Article I, the NWS clearly indicated their intentions that they would not allow the NNWS to acquire independent control of this technology. The peaceful applications of nuclear explosives technology were, however, not denied. It was assured that this technology of future would be made available to the NNWS on request. This caution was taken only to prevent against its misuse.

India's scientists who were aware of the potentialities of this technology did not accept this arrangement since the NNWS were left at complete mercy and goodwill of the NWS. The sudden underplay of the PNE technology in the United States in mid-1960's and the experiences with aid and assistance programme made India further apprehensive about the commitments of the NWS to provide the fruits PNE technology on the terms as spelled out in the NPT. India felt that such arrangements were evolved to construct a fool-proof system to protect the techno-economic and political interests of the NWS

With these apprehensions, therefore, India pleaded initially for a separate treaty arrangement on this issue. In later stages, however, when it became evident that the control of the PNE technology would become the part of the NPT, it pleaded for a firm legal commitment of the NWS to distribute the benefits of nuclear technology in a non-discriminatory manner. India however has never subscribed to the view that the NNWS were likely to misuse this technology. On the contrary India felt that these arguments were being extended to prevent the NNWS to exploit the techno-economic benefits of this technology.

No doubt India failed to influence the opinion in its favour against the organised support of the NWS, yet it did not hesitate in spelling out that such a system was being constructed deliberately to perpetuate discrimination in the crucial areas under the pretext of the NPT.

India clearly indicated that not only would it weaken the international system by exacerbating interstate tensions, rather the regime of

non-proliferation constructed on these foundations would also be very fragile.

Thus, the discussion on each of these issues in a detailed manner has clearly indicated that India's views on nuclear proliferation, which had emanated from its different world view and value preferences, were different. However, they received least consideration in the formulation of the NPT, and outrightly a discriminatory system was created by the NWS for the maintenance of the contemporary international system with least regard to the problem of nuclear proliferation. India could not endorse the NPT system, as neither it paid due respect to the international consensus on non-proliferation nor it seriously addressed itself to the problem of nuclear proliferation. On the contrary it perpetuated the iniquitous and hegemonic world order. India's adherence to the NPT apart from extending legitimacy to the policies of super powers would have been a serious departure from its basic principles of foreign policy Panchsheel, Non Alignment and Nuclear Disarmament.

At the outset it may seem that India's NPT diplomacy was a failure as it could not affect desirable changes in the NPT despite being an ardent supporter of non-proliferation. The fact that India's stance in broader terms have been reiterated in last three NPT Review Conferences and in the last two UN Special Session on Disarmament, it only indicates that India has remained the protagonist of a positive approach on the issue of nuclear non-proliferation.

Succession of Newly Independent States to Multilateral and Bilateral Treaties

Anis-ur-Rehman

Sup: Dr V.S. Mani

The thesis on "Succession of Newly Independent States to Multilateral and Bilateral Treaties" deals with the subject in six parts. The first part of the study broadly examines the impact of the newly independent states on the development and general problems of international law, while the second part goes into the doctrinal problems of succession of states. The third part dwells largely on the general principles and state practice relating to succession of newly independent states to treaties, whereas the fourth and fifth parts specifically deal with succession of newly independent states to multilateral and bilateral treaties. The sixth and final part highlights the conclusions of the study.

The post Second World War era saw the establishment of international institutions and the emergence of newly independent states in large numbers in Asia, Africa and Latin America. The participation of these states in international relations as sovereign states side-by-side with the 'old' states, have raised important international problems—their insistence on a revision of the general principles of traditional law and introduction of new principles deriving from modern state practice and attitudes, as underlying the basic framework of modern international relations. These newly independent states demand a right to the natural wealth and resources within their territorial limits to ensure their economic independence, and this has affected largely the traditional law of succession of states pertaining to multilateral and bilateral treaties. The re-affirmation of the traditional principles such as sovereignty and equality of states as well as emergence of new principles such as self-determination of peoples and colonial territories, through the deliberative organs of international organisations such as the UN General Assembly representing the consensus of all states has been the hallmark of the development and codification of international law since

1945. In view of these developments, revision of traditional concepts of succession of states, such as that of universal succession amounting to an automatic enforcement of continuity concerning the obligations of the predecessor state on the successor state, has been most urgent, in the light of existing state practice and contemporary international legal norms.

Basically, the concept of state succession has been vastly inhibited by the perceptions of the contemporaneous exigencies. The traditional terms of state succession, such as 'transmission of sovereignty' and 'transfer of rights and obligations' no longer remain prevalent in state practice as valid rules of state succession. Insofar as a more realistic conception of succession of states is concerned, a greater emphasis is laid essentially on the replacement of a state in the responsibility for the international relations of a particular territory. The law of state succession has already witnessed various ups and downs with the passage of time in international law. Its conceptual fabric changed according to the growing needs of the changing international society. However, international law is a living, rather than a static, phenomenon. The present state of succession in international law is principally consensual act of the successor state. It is not naive to say that no traditional theory of succession is fully accepted today.

The doctrine of succession of states was originally imported by some early writers on the subject from municipal law to international law and this has resulted in a plethora of theories of state succession. But many of these theories ignore the basic difference between these two branches of law, —that in international law the consent of a successor state is of predominant importance prior to the occurrence of succession, whereas in municipal law succession may take place without the prior consent of the heir in respect of the rights and obligations of the deceased. From this stand viewpoint, consenting-in formula is preferred in international law, to the consenting-out formula of state succession.

While there are as many theories of state succession as there are writers on the subject, this research work does not go beyond the outstanding work done by D.P. O'Connell on the theoretical problems of state succession. Prominent among these theories are the *tabula rasa* theory and the theory of consent of states. Both these theories are still largely valid and have received a special orientation in the light of the contributions of the newly independent states to the development of the modern international law. This has had tremendous impact not only on the law of state succession, but on the law of treaties itself. In conflict-

ing situations, both the branches of law are equally important from the viewpoint of succession cases. Unequal treaties are not valid for purposes of succession, according to the principle of self-determination, and such treaties cannot be imposed forcibly on the successor state. Evidently, the contemporary law of state succession is highly influenced by the principle of self-determination.

Indeed, the large-scale emergence of the newly independent states has refuted most traditional doctrines of the law of state succession and the subsequent state practices developed largely on the experience of early newly established states in respect of their succession to treaties. Although, their predecessors, such as Great Britain, France, Belgium, Spain, the Netherlands and Portugal evolved different techniques for the shifting of their obligations to their respective successors in relation to the latter's territories such as inheritance treaties and devolution agreements. But the law of state succession in respect of multi-lateral and bilateral treaties necessitates two distinct rules with a view to dealing with succession problems of newly independent territories, resulting from an association with an already established state, or from emergence as separate newly independent states—namely, the 'moving treaty frontiers' rule and the 'clean slate' rule. The former rule covers the cases concerning the association of a territory with an already established state, where the treaties of the existing state replaces the treaties of the predecessor state in respect of the territory, which has now become part of the existing state. On the other hand, according to the 'clean slate' rule, a newly independent state has full freedom to continue or discontinue the treaties of its predecessor state and it is unencumbered by the responsibilities of its predecessor in respect of its territory. In succession cases of the newly independent states, the *clean slate* rule became quite prominent in operation, when their colonial predecessors used to conclude the devolution agreements or inheritance treaties with the successor states in order to shift to the latter their liabilities and obligations of international relations undertaken by them in respect of the colonial territories now independent. But the newly independent successors subsequently felt that such agreements have been the price paid by them for their independence. As a result, they adopted a method of making unilateral declarations soon after independence following either of the two methods from the practice in regard to such declarations, namely, (a) empirical and (b) rational legal methods. The empirical legal method refers to the practice of formulation of a general unilateral declaration by the successor state at its independence, while the rational legal method represents the practice of making such a declaration after a thorough investigation by the successor state of the

treaties bequeathed by the predecessor state. There are, however, some treaties which are not affected by the events of succession of states and these treaties are of permanent character. These are as essentially boundary and other territorial treaties. Non-applicability of *clean slate* rule to such treaties is based on the rule of prudence that if these treaties are disturbed, chaos will ensue.

As regards succession of states to multilateral treaties, such a succession is based exclusively on the prior legal nexus established by the predecessor state between the treaty and the territory which has now become independent. A newly independent state may claim its succession to the multilateral treaties of its predecessor state only on the basis of the prior legal relationship between treaties and its territory. However, succession of states cannot take place in respect of (a) a restricted multilateral treaty, or (b) where there is inconsistency of succession with the constituent instrument of an international organisation, or (c) where the succession will be incompatible with the object and purpose of the treaty. With regard to multilateral treaties, the depositary practice plays a significant role in relation to succession of states. The United Nations Secretary-General, acting as depositary to a number of multilateral treaties, has by now evolved a practice whereby the newly independent states are enabled to select appropriate treaties of their interest for giving their final consent to their continuation in force in respect of their territories by virtue of succession. However, in relation to succession of states to bilateral treaties, the depositary function is performed by the parties concerned to a bilateral treaty.

However, from viewpoint of succession of states, the previous multilateral treaties in whose formulation a predecessor state had already taken part can be categorised into three groups in terms of their status at the time of independence of a successor state—namely, (a) multilateral treaties in force, (b) multilateral treaties not in force, and (c) multilateral treaties signed but not ratified, approved or accepted by the predecessor state in relation to the territory of a successor state. Multilateral treaties in force signify the treaties which have been applied by the predecessor state with full legal effects in respect of a territory which is now an independent state. A successor state is entitled to succeed to the previous treaties in force on the basis that its predecessor state had previously applied these treaties in respect of the former's territory. In case of a multilateral treaty not in force, a newly independent state can be a contracting state to such a treaty by reason of the fact that its predecessor state had previously given the consent to be bound by such treaties, but these treaties could not come into force by

the time of independence of the successor state. Similarly, with respect to multilateral treaties signed but not ratified, approved or accepted by the predecessor state, a newly independent state may succeed to the consequences of the signature made by its predecessor state to the treaty and it can be a state party only by ratifying, approving or accepting such treaties. Besides this, many a multilateral treaty itself contains a specific provision for the participation of a newly independent state, although the state is free to accept or reject such a right to participation.

Succession to the reservations and objections made by the predecessor state to a multilateral treaty has been another interesting area dealt with by the 1978 Vienna Convention on Succession of States in Respect of Treaties. A newly independent state succeeds to such reservations or objections only by specifically making its intention clear in its notification. Succession of states in respect of reservations by other states differs from succession in relation to a multilateral treaty as such with which such reservations are attached. There is no rule now in relation to automatic succession of states concerning a multilateral treaty, whereas when succession occurs reservations and objections already made by other states continue to exist in relation to the territory of the successor state. When a successor state is silent but it circulates a notification of succession with respect to a multilateral treaty of its predecessor state with which certain reservations or objections are associated, since, as a rule, it inherits such a treaty as a whole including all the attachments linked with it, whether reservations or objections.

Identical rules (as applicable in case of succession of a state to reservations) are also applied in cases of succession of a state to the consent to be bound previously expressed by the predecessor state to a part only of a multilateral treaty and the choice made by such a state in respect of differing provisions of a multilateral treaty. Significantly, when a successor state is silent on the participation of the treaty it is deemed to succeed exactly to the same position of a previous treaty, as its predecessor state had already enjoyed it in respect of the former's territory. In other words, its consent to be bound by the predecessor's treaty is construed restrictively. Insofar as the rules regarding provisional application of a multilateral treaty are concerned, a newly independent state may also succeed to the provisional application of the treaty as previously applied by its parent state in respect of its territory. On the other hand, it can also apply provisionally all the treaties of its predecessor state for a thorough examination before their full application to its territory. This is, in fact, achieved either through a collateral

agreement with the other parties concerned or by making a unilateral declaration in this regard.

The procedure generally used by the newly independent states in their practice for the extended application of their predecessors' multi-lateral treaties is by a notification of succession. In case of a multi-lateral treaty in force, the effect of such a notification is that the treaty is extended to the territory of an independent state from the date of its independence or from any other date for which a treaty itself provides or upon which the parties concerned themselves agreed. In case of a multilateral treaty not in force, such a treaty is considered applicable only from the date of a notification of succession of states, unless a different intention appears from such a notification or a treaty itself provides for any other date. When a treaty is not applied by a newly independent state even provisionally in respect of its territory, it will remain suspended in its operations till notification of succession.

Succession of states in respect of bilateral treaties is purely based on a mutual agreement between a successor state and the other state party to a prior bilateral treaty, since the bilateral treaties concluded by the predecessor state may be prolonged only on reciprocal grounds. Moreover, in succession of a state to bilateral treaties, the bilateral relations between states play a dominating role. Thus a newly independent state cannot be impelled to accept the continuation of prior bilateral treaties, since a newly independent state is always a 'third party' to the treaties of its predecessor state as it did not participate in their conclusion. The resurrection of such treaties is only feasible, when a newly independent state tacitly expresses such intention. Further, the consent of the other state party which has been a partner to the predecessor state is equally important to consummate succession by a newly independent state. When the continuation of prior bilateral treaties is agreed between a newly independent state and the other state party, such a relationship will mark a newly established relationship between the parties concerned, whether on the conditions already laid down by the predecessor state in respect of the former's territory or on new conditions. It signifies that the old bilateral treaty relations are mutually resurrected between these two states concerned by an agreement on the basis that the conditions had been already established between the predecessor state and the other state party. Nevertheless, the original bilateral treaty can either be maintained exactly in the same position as it was previously maintained before independence of the successor state, or it can be modified or added with certain new provisions mutually agreed by the parties concerned in

order to revive bilateral treaty relations. The succession to bilateral treaties is more a revivification than the maintenance of the prior treaties. The principle on which succession of states in relation to bilateral treaties is based discards the idea of universal state succession *in toto*, although *fait accompli* is quite important. Succession of states with regard to bilateral treaties rather supports the doctrine of auto-limitation of states, and the theory of consent so cardinal to the law of treaties.

A treaty between a newly independent state and the other state party, upon "succession", establishes a treaty relationship parallel to the original treaty as concluded between the predecessor state and the other state party. But the bases and situations created by the prior bilateral treaty have a legal nexus with the territory of the successor state and this is the physical fact upon which a state could resurrect previous relationship by virtue of succession. Hence, succession of states in respect of bilateral treaties is conditional, rather than an advantage for a newly independent state to proceed forward on the conditions already established by its predecessor state. On the other hand, when a new bilateral treaty relationship is established between a newly independent state and the other state party to the prior treaty, it immediately cuts the umbilical cord directly between a predecessor state and the other state party in respect of application of the prior treaty to the territory of the newly independent state. This underscores the effect of termination, amendment or suspension in operation of the prior treaty as between the predecessor state and the other state party, insofar as the new bilateral treaty relationship between the successor state and the other state party is concerned; or *vice versa*.

In sum, a study of the 1978 Convention in the light of modern state practice of the newly independent states indicates that many traditional concepts of state succession in respect of treaties, mostly based on municipal law analogies, have come to be discarded as incompatible with the modern international community of sovereign states, and that the Convention generally endorses the clean slate rule and the rule of consent of states.

Verb Sequences in Malayalam

Devi Gopalakrishnan

Sup: Dr. Anvita Abbi

The dissertation is a study of different types of verb sequences in Malayalam, a South Dravidian language. Verb sequences are syntactic combinations of more than one verb form, where the first member appears in some non-finite or root form, while the second member is in finite form, being inflected for the relevant grammatical categories in the language. Three main types of verb sequences are taken up for study here: conjunctive participial verb sequences, compound verbs, and sequences of main verbs and auxiliary verbs. These are examined with a view to discover their syntactic and semantic characteristics, as well as to reveal the essential nature of their functioning in the language. There are five chapters in the dissertation.

Chapter I gives a brief outline of the orientation and goal of study, as well as the methodological procedures followed in the course of data elicitation.

Chapter II takes up for study *conjunctive participial verb sequences* that consist of a sequence of two or more verbs, all appearing in the sequence with the meanings that they would have as independent main verbs, and in which all but the final member of the sequence are in non-finite forms (e.g. *vanne kidennu* 'came and lay down').

Malayalam CP constructions are classified into two main types : those that involve only one underlying sentence, and those that involve more than one. In CP constructions of the first type, the relation of the first, participial verb form to the second is seen to be that of a manner adverbial (e.g. *oodl vannu* 'came running'). The second type of CP constructions are those that are derived from more than one underlying sentence with identical subject NPS (e.g. *nanacce unakki*

'washed and dried'); this hypothesis is based on concrete linguistic evidence.

Whether the non-adverbial CP constructions are nothing but alternative coordinate structures in the language, i.e. whether their sole function is to link two or more independent sentences with identical subject NPs, is a question raised and discussed at great length in the chapter. It is seen that the function of these constructions is not co-ordination, but the indication of certain close relationships between the actions or events represented by the verbs in the CP construction. In other words, when two events are related in terms of *cause* and *effect*, *means used* and *end achieved*, or as *logically related parts of a larger event*, then they are represented by verbs appearing in a CP construction.

Another misconception regarding the function of these constructions is that they indicate temporal sequence in which the actions/events, represented by the verbs in the construction, occur. It is argued that the indication of temporal sequence per se is not a function of CP constructions.

Also taken up for discussion in the chapter is the question of whether, in CP constructions involving more than one underlying sentence, it is possible for the second verb to have a subject NP that is not the same as that of the first, non-finite verbal form. Contrary claims have been made regarding this in related discussions on other language. In Malayalam there are a large number of cases where verbs with different subject NPs occur together in a CP construction. A close survey of such sentences reveals that in the language, two sentences with different subject NPs may be linked together in a CP construction, provided (i) they represent pragmatically related events or activities and (ii) the subject NP of the second clause is also a part of the verb complement of the first clause.

Regarding the underlying representations of CP constructions, it is felt that while at one level, it is possible to set up two different underlying structures corresponding to the two basic types of these constructions, at another level, a single underlying structure reflecting the functional commonality between all CP constructions, irrespective of whether they are derived from one or more than one underlying sentence, could be proposed.

Other aspects of CP constructions taken up for consideration in the chapter are poly-verbal CP constructions, different types of

complementation and negation of CP constructions, reduplication of the participial verb form and its functions in such constructions, and the factors responsible for cooccurrence restrictions holding between participial and finite verbs.

Chapter III attempts a fine-grained description of compound verbs, that are sequences of a main verb in participial form and an explicator in finite form. The explicator, although homophonous with some lexical verb in the language, is a grammatical item that serves to supplement the meaning of the preceding main verb by marking it for features like *intention*, *desirability*, *volition*, *benefaction*, etc. (e.g. *jeyms ente peṭṭi tuRaṇṇa kalannu* 'James opened my box'—undesirable).

The chapter begins with a review of available work on Malayalam compound verbs. This is followed by the study proper. Seven explicators are isolated. These are: *kaḷa—*, *po—*, *koḍu—*, *koḷ—*, *vay—*, *taḷḷ—* and *iḷ—*. Each of these is examined closely from the points of view of their individual functions and cooccurrence restrictions vis-a-vis preceding main verbs.

In the sub-section entitled 'some syntactic characteristics of compound verbs', their complementation, negation (much debated), reduplication, occurrence in conjunctive participial constructions, and in imperative sentences, are discussed.

Co-occurrence restrictions holding between main verbs and explicators are found to depend on three factors: (a) inherent features of the main verb, (b) elements in the immediate context in which the main verb occurs, and (c) pragmatic features involved. These are taken up one by one.

A brief note on the markedness of the compound verb vis-a-vis the simple verb, is followed by a detailed discussion of the most general function of compound verbs as a class. There have been considerable differences of opinion regarding the issue, and we find that a variety of meanings have been attributed to the compound verb. After examining each of these claims one by one in relation to the phenomenon in Malayalam, the present study concludes that while many of the functions attributed to the explicator as a general grammatical category may very well be the meanings of some of the individual members of the class in Malayalam, semantic explication seems to be the only function that can possibly be common to all occurrences of the compound verb in the language. All this is supported by adequate evidence.

Finally, on the relation between the meanings of explicators and the corresponding homophonous lexical verbs in the language, it is felt that while the meanings of the two may, in some cases, seem close, owing perhaps to the origin of compound verbs in conjunctive participial verb sequences, explicators are totally grammaticalized, having no lexical meaning whatsoever.

Chapter IV analyses a third type of verb sequence—that consisting of a main verb followed by an auxiliary verb. The chapter starts off with a working definition of auxiliary verbs as those elements of the verb phrase that have membership in a closed system, and that serve to express the mood, tense, or aspect of the action denoted by the main verb. This is followed by a brief note on the short-comings of available descriptions of Malayalam auxiliaries.

Auxiliary verbs in Malayalam are seen as being of two types : *simple* and *complex*. A simple auxiliary verb is one that consists of a single verb stem alone, while a complex auxiliary verb consists of either two verb stems, or a verb stem and a suffix. In all, twelve auxiliary verbs are studied in terms of the form of the preceding main verb, the functions of the auxiliary, and the co-occurrence restrictions, if any, on their appearance with lexical verbs in the language.

The chapter ends with a section on multi-auxiliary verb sequences (containing two or more auxiliary verbs), and rules that operate in deciding what auxiliary verb should appear first, and what later, are proposed.

Chapter V, the concluding chapter, seeks to relate all the three types of verb sequences studied in the course of this dissertation. The question of the theoretical difference between explicators of compound verbs, and other auxiliary verbs, is raised. It is argued that these are two different functional categories in language and are, therefore, not to be referred to by a single term as has most often been done in linguistic descriptions of Malayalam. The study concludes with a look at long verbal complexes consisting of all the three types of verb sequences that have been discussed here.

Elements of Spatial and Temporal Relations : A Semantic Study of Malayalam

Franson Davis Manjali

Sup : Dr. Anvita Abbi

This study begins with an examination of some of the important approaches to the study of meaning. These approaches are seen as revolving around four major issues in Semantics. These issues are :

1. whether meaning is to be described in terms of intra-or extra-linguistic considerations
2. in what way, meaning is related to the cognitive and emotive spheres of human experience,
3. whether meaning is a matter of sense or of reference, and
4. how do we differentiate the lexical and the grammatical meanings within semantic structure.

In the opening chapter where these issues have been explored, the semantic views of Saussure, Bloomfield, Austin Frege, Katz, Kaznelson and Hjelmslev come up for critical discussion. The important semantic perspectives that we are arriving at here are :

1. Speech or any other linguistic activity ought to be seen as a *signifying activity of the speaking subject*,
2. Meaning or signification is necessarily *continuous*.

From these perspectives we are able to move on to two propositions. First, a semantic description can not be complete without accounting for the presence of the speaking subject on the plane of content. This is so, because the meaning of deictic elements necessarily imply a relation of the referred object/event with the speaking subject/speech event. This takes us to the second proposition. Signification

concerns not merely objects and events, and other possible entities. Beyond the reference to objects and events, in and by the signifying activity, a speaking subject constitutes various kinds relations between objects and between events. It is these content-level relations that ensure the continuity of the meaning. In our view, speech is more about the constituting of such relations than about talking about objects and events in isolation. We also maintain that the grammatical elements in natural language are involved in the constitution of meaning relations; hence we argue that the signification of grammatical elements is *relational*, and that it is as important as the signification of lexical elements, which may be called referential.

We proceed to trace certain viewpoints which would lend support to our argument that cases, pre-/post-positions, aspects, tenses and other deictic elements are concerned with spatial and temporal (relational) signification. In this regard the views of Jespersen, Fillmore, J M. Anderson, Hjelmslev, Bréal and Henry Sweet have been consulted to show that cases and pre-/post-positions have a basic spatial meaning. We have also constructed a framework for the description of cases and prepositions, on the basis of English data. The spatial relations may involve *static* or *dynamic* objects. Under the 'static' category we have relations corresponding to the nominative and vocative, relations of possession (alienable and inalienable), of proximity, of horizontality (lateral and perspectival), of verticality (surfacial and non-surfacial) and of non-proximity. The dynamic relations are of two types. The first is the 'transfer' type, exemplified by the accusative case and the dative case/preposition. The second is 'the 'motion' type whose examples are *from out of*, *into* and *to* which represent four different kinds of motion relations.

The elements of temporal relations, we note in the occurrence of pre-/postpositions, aspects and tenses. The temporal adpositions are mostly the same as the spatial ones, and their meanings are metaphorical extensions of the latter. The aspect is also sought to be defined in terms of temporal relation. The aspectual element, we have tried to show, signifies a relation between a referred event and the event as a whole. Thus here the temporal relation is seen as one of proportionality between the actual time and the potential time (of the event).

In the description of the tense-meaning, we have referred to two contrasting views. In one, proposed by Reichenbach and others, time reference is seen as linear, and can be described in terms of the point of speech (S), the point of reference (H) and the point of event (E). The

differences between the simple and the so-called complex tenses (aspects) are indicated as differences in the linear arrangements of S, R and E, While, in the other view followed by the generative semanticists, the complex tenses are seen in terms of an hierarchy of tenses. Here the simple tense is a higher verb under which are arranged the complex ones.

Instead of the above approaches, we have described the tense elements with their deictic character in focus. For us the tense elements signify three different temporal relations, of anteriority, simultaneity and posteriority between the referred event and the speech event. These three relations correspond to the past, present and future tenses. By introducing the speech event as part of temporal relations, we are again bringing the speaking subject on the content plane.

In our description of the Malayalam data, we have identified 21 grammatical elements that signify spatial relations. These are : the demonstrative (of object-deixis), locative (of place-deixis), nominative and vocative (of static relations, with single object): possessive, inessive adessive, contentive, abessive, and comitative (all of static relations... double object); accusative, dative, instrumental and sociative (all of dynamic relations involving 'transfer'); and ablative, elative, illative, allative, commensive, terminative and translative (all of dynamic relations involving 'motion'). Our description of these elements include their relational meaning, function, visual representation and suitable sentence-examples.

The description of the elements of temporal relations in Malayalam runs into six sections. In the first, we deal with the non-verbal deictic elements, that correspond to the English words *now*, *then*, *today*, *tomorrow*, *that day*, *yesterday*. We have indicated their meaning in terms of temporal relations and have provided suitable examples. In section 2, we have described the postpositional elements with a temporal meaning. These are the adessive, inessive, instrumental and contentive. Of these, except the adessive all the postpositions are formally identical with their spatial counterparts. The temporal adessive and the spatial dative have the same formal element. The special behaviour of the temporal contentive is also examined.

In the third section, the Malayalam tense elements, past, present and future have been discussed with reference to their anteriority, simultaneity and posteriority relations they signify. In the next section, we have discussed the 'be' verb for which there are two elements in

Malayalam:/ana/and/unda/. The two 'be' verbs have been studied in order to bring out their semantic specificities. This description is further useful in understanding the aspectual element in Malayalam, which often includes the 'be' verb in its combinatory formation.

In the semantic description of the aspect, we recognise the need to identify the three 'axes' to which the linguistic presentation of every event is made subject to. These are : the fact axis, the number axis and the time axis. The fact axis, in a way connect the aspect category with the modal category. This is evident from the observation that the/ana/and/unda/verbs can ambiguously signify both a temporal ('continuity' or 'progression') and a modal ('experience' and 'evidence') meaning. The number axis, we see, as Jespersen had pointed out, pertains to the verb also. Thus the iterative and frequentative aspects are said to signify events of *multiple* occurrence, as opposed to the perfective which would signify a *unique* event.

However, the description of the aspect with *time* as the major axis, shows ten different aspectual formations in Malayalam. These are the imperfective, imperfective-continuative, imperfective-progressive, habitual, perfective-continuative, perfective-stative, perfective-progressive, iterative, iterative-progressive and prospective.

In the final part, we move from the temporal to modal meanings. This follows our earlier observation regarding the temporal-modal ambiguity of the Malayalam 'be' verbs. As we have mentioned, with regard to other grammatical element, the modal elements also have relational meaning. The modal elements are described as signifying modal relations between propositions. The modal relation may be one of *existence*, of *possibility*, or of *necessity* between a null proposition and an utterance proposition. Or alternatively, the modal relation may be between two propositions, as is the case with the *conditional*.

Here we also note that the modal elements (e.g. *can* of possibility, *must* of necessity) can also signify what is known as *deontic* (distinct from the *epistemic*) meanings of command, permission, threat, request etc.. These deontic meanings, we have maintained, correspond to what we call *communication relations* assumed on the content plane. These communication relations, like the spatial, temporal and modal relations are constituted in and by the signifying activity of the speaking subject.

Though there are separate formal elements to signify modal and communication relations, that is, the modal and mood markers, we notice an absence of such a formal distinction in Malayalam.

The Lexico-Semantic Group of Verbs of Speech from the Viewpoint of the Synonymical Relationships between them

Neeraja Jaiswal

Sup: Dr. K.P.S. Unny

Настоящая диссертация рассматривает одну из самых распространённых и употребительных лексико-семантических групп /ЛСГ/ в русском языке – группу глаголов речи. Разнообразие значений и применений глаголов этой ЛСГ показывает сложность внутренней организации ЛСГ глаголов речи и, тем самым, представляет большой теоретический интерес.

В работе делается попытка, во-первых, найти более приемлемое для нашей цели определение глаголов речи, во-вторых, выбрать глаголы речи в русском языке в соответствии с этим определением, в-третьих, выделить элементарные смыслы или семантические признаки у этих глаголов, чтобы классифицировать их на группы и подгруппы, в-четвёртых, найти синонимические отношения между глаголами внутри подгруппы и между подгруппами и вычислить расстояние между такими синонимами при помощи какой-нибудь формулы.

Итак, основной задачей данной диссертации является подробная классификация ЛСГ глаголов речи на группы и подгруппы на основе поэтапного выделения общих и различительных семантических признаков глаголов, входящих в эту ЛСГ и установление специфики синонимических отношений между глаголами внутри подгруппы и между подгруппами. Установление таких синонимических отношений имеет непосредственную связь и с проблемами преподавания русского языка как иностранного, так как выбор самого подходящего глагола из синонимического ряда вызывает

огромные трудности у иностранцев. Поэтому тщательный анализ вышеуказанных основных вопросов может иметь практическую пользу, ибо выяснение этих отношений и включение этого знания в преподавательскую практику облегчит процесс восприятия студентами глаголов речи и способствует дальнейшему обогащению словарного запаса в активной речи студентов. Правильная классификация глаголов речи может иметь и теоретическую ценность: она содействует сопоставлению глаголов этой ЛСГ с такой же ЛСГ других языков.

Одним из щекотливых вопросов в этой связи является само определение "глаголов речи". Существующая литература не обнаруживает единогласия по этому поводу. Такое разногласие в определении обуславливается различием критериев, используемых для выделения глаголов речи. Так, например, Бахтина В.П. считает, что "глаголы речи обозначают действие /в широком смысле/, совершаемое речевым аппаратом. Это произношение членораздельных звуков — отдельных слов или фраз — в процессе речевого общения... Процесс речи — это общий семантический признак целой группы."¹

Определение глаголов речи, данное Бахтиной, в общем, помогает выделить эту лексико-семантическую группу. Однако, нам кажется, что вызывает сомнение использование ею в определении слов "членораздельные звуки": глаголы речи в принципе должны оставаться глаголами речи независимо от того членораздельно ли или нет говорящий произносит эти звуки. В подтверждение этому можно указать на то обстоятельство, что сам автор включает в свой список такие глаголы, как "бормотать", "ворчать", которые имеют четкий семантический признак "говорить невнятно".

1. Бахтина В.П. К семантической характеристике глаголов речи в русском языке. В сб.: Материалы по русскому языку и языковедению. Изд. Воронежского ун-та. Воронеж, 1964.

По мнению Васильева Л.М. общим смысловым идентификатором глаголов речи является опорное /ядерное/ слово "говорить", которое означает: "выражать посредством устной или письменной речи какие-либо мысли с целью их сообщения кому-либо".²

Работы Васильева охватывают не только глаголы говорения, но и глаголы письменной речи /например: "писать" и "публиковать"/. Кроме того, он также рассматривает среди глаголов речи такие глаголы, как "телеграфировать", "сигнализировать", обозначающие действия, которые производятся без участия органов речи. Мы думаем, что в ЛСТ глаголов речи можно включить только такие глаголы, которые называют действия, совершаемые при обязательном участии органов речи.

По Ничман З.В. глаголы говорения объединяются на основе признака "пользоваться устной речью".³ Ничман, по-видимому, понимает термин "глаголы говорения" слишком широко и поэтому включает сюда даже глаголы, обозначающие речь как акт наименования, например: "прозвать", "именовать", имеющие значение "дать имя/прозвище кому-н." Такие глаголы не обязательно содержат семантический признак "говoreние".

2. Васильев Л.М. Семантические классы глаголов чувства, мысли и речи. В со.: Очерки по семантике русского глагола. Башкирский гос. ун-т им. 40-летия октября. Уфа, 1971. стр.214.

3. Ничман З.В. Глаголы говорения /устной речи/ в современном русском языке. Автореф. на соиск. уч. степени канд. филол. наук. Томск, 1980. стр.8.

Степанова Г.В. выделяет глаголы речи на основании словарных определений.⁴ Можно сомневаться во включении ею таких глаголов как "шелестеть", "шуршать", поскольку нам кажется, что эти глаголы — глаголы звучания, а не глаголы речи. /см. также стр. 3/.

Данная лексико-семантическая группа рассматривалась и другими исследователями как со стороны определения глаголов речи, так и со стороны их классификации.⁵ Некоторые из указанных работ при таком рассмотрении учитывают не только семантические характеристики, но и синтаксическую сочетаемость и конструктивные особенности употребления этих глаголов.

Нам кажется, что для самого определения глаголов речи в первую очередь достаточно опираться на физиологические и семантические характеристики действия говорения. Поэтому глагол речи должен иметь две характеристики: 1. обязательное участие органов речи при действии и 2. коммуникативное значение. Следовательно, нам представляется удобным определить глаголы речи как глаголы с семантическим признаком "произносить звуки, имеющие коммуникативное значение для человека".

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4. Степанова Г.В. Лексико-семантическая группа глаголов речи в современном русском языке. Автореф. на соиск. уч. степени канд. Филол. наук. М., 1970. стр.7.
 5. См. раздел "Библиография" в диссертации.

"Коммуникативное значение" может пониматься широко. Любой произносимый человеком звук может иметь в конце концов коммуникативную цель. Коммуникация может быть прямая, произвольная, а может быть и косвенная, произвольная. Например, человек, который поет или рыдает, сознательно ничего не сообщает, но слушающему понятно, что ему весело или досадно и т.д. В таких случаях внутреннее состояние человека, выраженное подобными "загонами", сообщается слушающему. И таким образом происходит несознательная, произвольная коммуникация. Но мы понимаем "коммуникативное значение" более узко и не включаем такие глаголы в ЛСГ глаголов речи. Итак, на наш взгляд, вышеуказанный общий признак является идентификатором класса глаголов речи. В этом определении включаются все существенные признаки глаголов речи, подразумеваемые в определениях разных авторов.

При выделении глаголов речи иногда возникает трудности различения глаголов речи и глаголов мысли, когда они обозначают смежные процессы. Для решения этой проблемы мы исходили из того, что речь в принципе обращена к кому-либо. Говорящий направляет своё высказывание собеседнику или слушающему. Глаголы мысли лишены способности указывать на адресат действия.⁶

Глаголы речи также связаны с глаголами звучания. Глаголы звучания — это слова, обозначающие какие разнообразные звуки, существующие в природе. Разница между этой группой слов и глаголами

6. Пак Г.А. К вопросу о принципах выделения глаголов речи. В сб.: Вопросы теории русского языка. Науч. тр. Вып. 119. Новосибирский гос. пед. ин-т. Новосибирск, 1975.

речи заключается в том, что глаголы речи — это слова, обозначающие звуки, издаваемые только человеком, а глаголы звучания обозначают звуки, которые могут быть произведены не только человеком, но и предметом, животным и т.п. Поэтому мы включаем в глаголы речи только те глаголы, которые обозначают звуки, издаваемые животными, если они могут быть употреблены по отношению к человеку в переносном значении. /См. слова "для человека" в нашем определении глаголов речи выше/. Например, "мурлыкать" в первом значении означает — "издавать мурлыканье" /о кошке/, а во втором значении при переносном употреблении в разговорном стиле является глаголом речи, так как он обозначает — "тихо напевать или говорить мягким голосом" /о человеке/.

Принимая вышеуказанное определение глаголов речи, следующей задачей является выбор глаголов по этому определению и их классификация. Для этого выделяются семантические признаки /элементарные смыслы/ этих глаголов и виды компонентов. При этом принимаются во внимание не только интегрирующие признаки, но и дифференцирующие признаки данных глаголов. В результате этого выявляется некоторая иерархия этих компонентов. На первой стадии глаголы речи делятся на две большие группы на основании самых общих характеристик, таких, как способ физического исполнения говорения и дополнительный смысловой оттенок, вносимый данным глаголом. В первую из этих групп входят те глаголы речи, в которых, кроме процесса речи, имеется указание на физическую сторону произведения речи, т.е. как именно произносится речь /напр., "говорить носом", "говорить громко"/. Другая группа состоит из глаголов, имеющих, кроме процесса речи, указание на какое-то доомышленное элемент значения /напр., "говорить, прижавшись к уху", "говорить с целью учить кого-то"/. Принятый глагол "говорить" как ядро данной ИСТ, в нашей работе анализировался группы представлен следующим образом:

[illegible][illegible]

ком. Комитетом, но и в соответствии с тем, как разное подполье на-
-лет. Эти подполье разнятся между собой не только в составе
русской партии, но и в отношении более 100 подполье стало
лет, в разное количество времени в течение 1941-42

доп. Словарь русского языка в четыре тома Академии наук СССР под редакцией А. П. Брандербурга. Это словарь является самым полным словарем русского языка на сегодняшний день. Он содержит более 100 тысяч слов и выражений.

считывают разное количество глаголов, от одного до 234. Это показывает многообразие и богатство лексики русского языка для выражения такой исключительно важной деятельности человека как речь. При этом язык располагает возможностью большого выбора для выражения некоторых словосочетаний. Такая возможность может вызывать определённые трудности, так как иногда между такими синонимами имеются только трудно уловимые различия. Поэтому на следующей стадии мы пытались выяснить синонимические отношения между глаголами речи внутри подгрупп, и, по-возможности, квантифицировать расстояние между ними.

При всем разнообразии существующих в литературе определений синонимов одно обстоятельство остаётся более или менее бесспорным: что подавляющее большинство синонимов чем-то различаются между собой. Это даёт основание говорить, что среди синонимов имеются, во-первых, такие, которые чем-то различаются между собой /их много/ и, во-вторых, такие, которые, по-видимому, ничем не отличаются друг от друга /их мало/. Следовательно, самой важной проблемой для нас является не столько само определение синонимов, сколько измерение близости между этими глаголами.

Для определения близости между синонимами в литературе имеются разные формулы. Например, по Березану С.Г. коэффициент близости v вычисляется по следующей формуле:
$$v = \frac{2c}{n + m}$$
 где c — количество совпадающих СВ⁸ соответствующей пары слов /по-скольку совпадение идёт в абсолютном большинстве случаев по линии одного СВ, то c является, как правило, величиной постоянной, равной

8. СВ — семантические варианты

единице/, а n и m — число элементов ... смысловых структур слов....

В случае наличия синонимических связей данная величина⁹ всегда будет больше 0 и меньше или равна 1 ..., при $v = 1$ семантические структуры слов-синонимов совпадают, значит они тождественны в полном объеме ..., при $v = 0$ между рассматриваемыми словами синонимических отношений не существует ...¹⁰

Подобную формулу для вычисления коэффициента близости предлагает и Шехтман Н.А.: $D = 1 - \frac{2a}{a' + b'}$, где a — количество общих для слов A и B семантических множителей, a' и b' — соответственно количество множителей в семантической структуре A и B .¹¹

При компонентном анализе возможно найти разные элементарные смыслы в одном и том же семантическом варианте. Это обстоятельство не учитывается в формулах вышеуказанных авторов. Поэтому нам кажется более приемлемой формула Каменской О.Л.:

$$K(a, b) = 1 - \frac{P(a, b)}{K(a) + K(b) - P(a, b)}$$

где " a " и " b " — разные слова со всеми своими элементарными смыслами¹², $K(a)$ — число элементарных смыслов у одного глагола, $K(b)$ — число элементарных смыслов у другого глагола, $P(a, b)$ — число элементарных смыслов общим словам " a " и " b ", $X(a, b)$ — расстояние между словами-синонимами.

9. данная величина — v

10. Бережан С.Г. Вводная глава. Семасиологический подход к синонимам.

В кн.: Семантическая эквивалентность лексических единиц. Изд. "Штиль", Калинин, 1973, стр.65-66.

11. Шехтман Н.А. Опыт измерения расстояния между семантическими признаками слов. В сб.: Вопросы романо-германского языкознания. Тезисы докладов У конференции лингвистов, Уфа, 1966.

12. По Каменской О.Л. Некоторые вопросы лексической синонимии. В сб.: Научные доклады высшей школы. Филологические науки 2/56/. Изд. "Высшая школа", М., 1970, стр.73-74. Элементарный смысл означает мельчайшую единицу смысла в каждом значении одного слова.

Расстояния, вычисленные по этой формуле, могут меняться от нуля до единицы и принимать тем меньшие значения, чем больше синонимическая близость между словами.

Слова, у которых совпадают все элементарные смыслы называются абсолютными синонимами. Расстояние между абсолютными синонимами, вычисленное по приведённой выше формуле, будет равно нулю.¹³

Для определения близости между глаголами речи в нашей работе мы применили вышеуказанную формулу Каменской О.Л.

В заключении, мы пришли к выводу, что глаголы речи обозначающие процессы, относящиеся к одной из основных действительностей человека – говорению – характеризуются богатством и разнообразием семантических элементов, выражающих ими. Русский язык располагает большим выбором возможностей характеризовать процессы речи как со стороны самого исполнения этих процессов, так и со стороны дополнительных смысловых оттенков, сопровождающих эти процессы. Следовательно, глаголы речи в русском языке распадаются на две большие группы: 1. говорить + как 2. говорить + какой-то добавочный смысл

Проделанная классификация и подробный анализ семантических компонентов глаголов данной ЛСТ показали 42 способа исполнения процесса речи и 185 дополнительных семантических элементов, в результате чего глаголы речи в русском языке разделяются на 227 подгрупп. Каждая подгруппа таким образом представляет собой своего рода синонимический ряд нескольких глаголов речи, объединённых одним каким-либо общим семантическим элементом. Эти подгруппы различаются

13. Там же.

между собой и в количественном отношении. С одной стороны, имеется 5 подгрупп, включающих более 150 слов в каждой из них, а с другой стороны — 107 подгрупп, состоящих из 5 глаголов в каждой или меньше. В большинстве случаев в одну и ту же подгруппу входят слова как книжного, так и разговорного стили и просторечия. Подгруппы, в которых большинство глаголов принадлежит к нейтральному стилю, не много. Глаголов высокого, книжного стили, входящих в ту или иную подгруппу, очень мало.

Перечисление и выяснение семантических элементов всех глаголов и их распределение по различным подгруппам, на наш взгляд, является удобным справочным материалом. Наша классификация даёт в готовом виде /в виде списка/ всевозможные формы выражения определённого заданного смысла. Более того, в работе имеется попытка различать эти разные формы с целью правильного выбора нужного глагола из этого ряда. Для этого вычислена синонимическая близость разных глаголов каждого списка по отношению к доминанте. Выявление синонимической близости между доминантой подгруппы и остальными глаголами с использованием формулы Каменской О.Л. показывает в простой численной форме существование в языке абсолютных синонимов, которые проявляются лишь в некоторых значениях каких-то глаголов. Но для вычисления синонимической близости Каменская О.Л. не берёт в счёт стилистические различия. Поэтому, вычисление по её формуле даёт абсолютные синонимы /семантическая близость — 0/, которые часто принадлежат к разным стилям языка. В нашей работе мы постарались в ограниченном материале улучшить это положение. Мы сделали иерархический анализ различительных признаков глаголов, входящих в одну и ту же подгруппу. Такой анализ, действительно, показывает случаи абсолютных синонимов, где они ничем не различаются.

В большинстве случаев нами обнаружено, что расстояние /близость/ между глаголами-синонимами равно или больше 0.5 и употребление их в качестве синонимов возможно только в определённых контекстах, что приводит нас к выводу, что эти глаголы входят в разряд контекстуальных синонимов.

В некоторых подгруппах, например, в подгруппе "говорить сердито" или "говорить отрывисто" большинство глаголов очень близки к доминанте этих подгрупп, то есть, расстояние между ними в большинстве случаев находится ближе к нулю по шкале 0-I.

Проделанная работа также показывает, что синонимические отношения существуют не только между глаголами речи внутри отдельных подгрупп, но и между некоторыми из этих подгрупп, которые объединяются по более общим признакам. Например, по тону речи объединяются подгруппы "говорить тихо", "говорить незаметно", "говорить глухо", "говорить громко". "говорить звонко".

Научную новизну и различительные особенности данной диссертационной работы можно видеть в следующем:

- I. Работа предлагает такое определение глаголов речи, которое способствует различению глаголов речи от смежных явлений как глаголы мысли, глаголы звучания и т.д.

2. Она даёт подробную классификацию ЛСТ глаголов речи на группы и подгруппы, в результате компонентного анализа, принимая во внимание, главным образом, семантические характеристики самих глаголов, не привлекая синтаксические и другие аспекты, являющиеся за пределами этих глаголов.
3. Такая классификация даёт в готовом виде все формы выражения определённого заданного смысла.
4. В работе рассматриваются также синонимические отношения глаголов данной ЛСТ и вычисляется близость между глаголами речи внутри подгрупп, что поможет выбору нужного глагола из синонимического ряда.

Social Protest in the Pre-October Poetry of V.V. Mayakovsky (1912-1917)

Rito o M. Jcrath

Sup: Dr. K.S. Dhingra

Настоящая работа является попыткой подробного изучения и анализа не только главных элементов социального протеста в дооктябрьской поэзии В.В.Маяковского, но и самого характера этого протеста, как он выражается в его поэзии этого периода. В этой работе прослеживается эволюция и развитие этих элементов и на основе этого определяется характер социального протеста Маяковского.

Творчество Владимира Владимировича Маяковского очень глубоко и широко изучено не только в Советском Союзе, но и на Западе. Но западные критики в основном сосредоточивают своё внимание на послеоктябрьском творчестве поэта, особенно на его сатире. Такая тенденция возникает оттого, что эти критики чаще всего интересуются теми аспектами жизни и творчества Маяковского, которые могут быть использованы ими в антисоветской пропаганде и клевете (как, например, вопрос о самоубийстве поэта) и поэтому творчество Маяковского изучается на Западе именно с этой точки зрения. Она, конечно, приводит к одностороннему и даже искаженному истолкованию творчества поэта. В Индии же творчество Маяковского остается почти неизученным (напечатано только несколько статей популярного характера), хотя его поэзия переведена на многие языки Индии. Настоящая работа является первой диссертацией, посвященной Маяковскому в Индии.

В Советском Союзе Маяковский является одним из самых изученных поэтов XX века. О нем существует очень много материалов — работы научные, научно-популярные, биографические, воспоминания, мемуары, работы, посвященные изучению отдельных произведений, тем и образов; изучению стиля, языка, метафор поэзии Маяковского; изучению связи Маяковского с русской классической литературой — с Пушкиным, Некрасовым, Горьким, с литературой других республик СССР, с литературой социалистических стран; изучению значения творчества Маяковского в современном мире. Но большинство из этих работ сосредоточивает внимание на послеоктябрьском творчестве Маяковского. Это, конечно, совсем не удивительно, так как послереволюционный период, во-первых, составляет более длительный период литературной жизни Маяковского и, во-вторых, этот период является более зрелым периодом творческой жизни поэта. Это был период активного участия поэта в строении социалистического общества. Как раз в послереволюционный период Маяковский написал свои замечательные поэмы "Владимир Ильич Ленин" и "Корошо!" и сатирические пьесы "Клоп" и "Баня".

Но дооктябрьская поэзия Маяковского также является очень важным предметом исследований. Это было начало поэтической жизни поэта, его первые шаги. Правильное понимание и подробное изучение этого периода важно потому, что, во-первых, и в этот период Маяковский написал некоторые замечательные поэмы ("Облако в штанах", "Челюсть-позвоночник" и др.) и стихотворения, и во-вторых, изучение этого периода может помочь в изучении послеоктябрьской поэзии Маяковского, так как для правильного понимания послереволюционного периода необходимо

правильное понимание эволюции поэта, певца революции. Мы, конечно, не подразумеваем, что якобы нет работ, посвященных дооктябрьской поэзии Маяковского, или что его послеоктябрьское творчество изучается в отрыве от его дореволюционного творчества. Такое предложение с нашей стороны было бы совсем несправедливым и неправильным. Однако; в работах, посвященных жизни и творчеству Маяковского вообще, его дореволюционное творчество иногда изучено бегло, а иногда подробно анализируются только отдельные поэмы этого периода. В этих работах дооктябрьское творчество изучается только как предисловие к послеоктябрьскому творчеству. Существует мало работ посвященных исключительно дооктябрьскому творчеству поэта. Самыми главными из них являются работы В.Перцова "Маяковский Жизнь и творчество. (1893 - 1917)", Г.Черемина "Путь Маяковского к Октябрю", А.И.Сторожева "Сатира дооктябрьского периода в творчестве В.В.Маяковского", Р.Спивака "Дооктябрьская лирика Маяковского", Т.Пономаревой "Становление творческого метода в поэзии раннего В.В.Маяковского (1912 - 1917 гг.)" и несколько других. Качественный анализ дооктябрьской поэзии Маяковского можно найти и в таких книгах как "Маяковский. Очерк творчества". А.Метченко, "Творчество Маяковского" К.Г.Петросова, "Поэмы Маяковского" Н.Машниц-Верова и других, которые изучают творчество поэта в целом.

Советское литературоведение выступает против таких тенденций в маяковедении, которые или игнорируют связь Маяковского с футуризмом и принимают все в его творчестве как образец поэзии социалистического реализма, или же проходят

мимо всего его раннего творчества и характеризуют его как несущественную ошибку. Советское литературоведение (мы имеем в виду работы В.Перцова, А.Метченко, Г.Черемина, К.Петросова и других), доказало, что, во-первых, нельзя игнорировать раннее творчество Маяковского и, во-вторых, нельзя не видеть связи Маяковского с футуризмом. Поэтому, когда начинается разговор о дооктябрьской поэзии Маяковского, сначала всегда обсуждается вопрос о связи Маяковского с футуризмом. Как говорит А.Метченко, "спор идет о том, как оценить футуризм и его роль в развитии поэта: как явление, определившее его поэтические искания и открытия, или как явление, основные принципы которого поэту пришлось преодолевать в своем творчестве ...".¹ Таким образом, работы изучающие дооктябрьское творчество Маяковского, чаще всего стараются отвечать на вопросы: Что такое футуризм? Какая была связь Маяковского с этим движением? Чем отличается поэзия Маяковского от поэзии других футуристов?

Связь Маяковского с футуризмом, по мнению советских маяковедов, усложнила его творческий путь. Советские маяковеды считают, что в самом раннем дооктябрьском творчестве поэта (то есть в стихах "Утро", "Ночь", "Из улицы в улицу", "В авто" и др.) видны футуристические заблуждения (игра слов, затрудненность формы, языка, необычные ритмы...), но очень скоро (с написанием поэмы "Облако в штанах") Маяковский занял особое место в футуристическом движении, так как в его поэзии зазвучало социальное содержание, социальный протест, чего не было в поэзии футуристов. Советское лите-

1. Метченко А. Маяковский. Очерк творчества. М., Изд-во Художественная литература, 1964, стр. 4.

ратуроведение считает, что социальный протест в дооктябрьской поэзии Маяковского отличает его от других футуристов, и доказало, что именно социальный протест характеризует дооктябрьское творчество поэта. Изучение этого социального протеста, поэтому, исключительно важно для правильного понимания творчества Маяковского.

Советское литературоведение четко изложило главные элементы социального протеста в дооктябрьской поэзии Маяковского. В действительности, эти элементы социального протеста определены самим Маяковским в одной из своих статей, написанной в 1918 году. Но до сих пор характер этого протеста был мало изучен. Важно, что при обсуждении социального протеста дооктябрьской поэзии Маяковского, в советском литературоведении часто замечается тенденция анализировать его в ретроспективе, то есть, Маяковский берется как поэт — певец революции (которым он стал после революции) и с этой точки зрения изучается его дореволюционное творчество. Важно и то, что социальный протест дооктябрьского творчества Маяковского ещё не являлся самостоятельным предметом для подробного и глубокого изучения или анализа. Наша работа является попыткой более глубокого и подробного анализа не только главных элементов социального протеста на всем протяжении дооктябрьского творчества поэта но и самого характера этого протеста. Наша работа стремится изучить эволюцию социального протеста в поэзии Маяковского в этот период. Такое изучение может помочь не только в дальнейшем понимании дооктябрьского твор-

чества поэта но и в раскрытии новых путей и изучении вопроса об эволюции Маяковского после революции.

Настоящая работа делится на три главы. Первая глава содержит в хронологическом порядке обзор важнейших книг и статей о Маяковском, особенно о его дооктябрьской поэзии, с точки зрения анализа в них социального протеста. Это помогает нам определить основные положения советских критиков по интересующему нас вопросу. Вторая глава изучает футуризм в России и, до некоторой степени, в Италии. В этой главе мы сосредоточиваем наше внимание на протесте футуристов и на основном характере футуристического движения в России. Изучение футуризма, как мы указали выше, является очень важным при изучении дооктябрьской поэзии Маяковского. А протест является очень важной характерной чертой футуризма. Следовательно, изучение этого протеста необходимо для правильного понимания футуризма. Эта сторона футуризма, нам кажется, недостаточно изучена советским литературоведением. Изучение футуристического протеста помогает нам в анализе и протеста Маяковского, как он выражается в его дооктябрьском творчестве. Третья глава настоящей работы посвящена изучению дооктябрьского творчества Маяковского с точки зрения социального протеста. В этой главе анализируются главные элементы социального протеста и их выражение в дооктябрьской поэзии поэта, прослеживается эволюция и развитие этих элементов и на основе этого определяется характер социального протеста Маяковского.

Наша анализ показывает, что социальный протест В. И. Маяковского, выражаемый четырьмя криками "Долой!" — "Долой вашу любовь!" "Долой ваше искусство!" "Долой ваш строй!", "Долой вашу религию!" — в основном, представляет собой один громкий крик — "Долой господство над человеком, которое не разрешает человеку быть свободным и жить по-настоящему!".

По мнению большинства из советских критиков, этот протест Маяковского направлен против капиталистического бытия и против капитализма вообще. Очень часто, на основе этого протеста, Маяковский выделяется из футуристического движения. Одновременно, советское литературоведение утверждает, что бунт футуристов против эстетических вкусов "жирного буржуа" носил мелкобуржуазный анархический характер. Наш анализ показывает, что можно найти много общего между бунтом Маяковского и бунтом футуристов и, поэтому, если бы мы хотели дать какое-то определение социального протеста дооктябрьской поэзии Маяковского то мы его назвали бы футуристическим.

По нашему мнению, бунт Маяковского носил стихийный анархический характер, так как поэт до революции еще не понимал, каким путем нужно изменить действительность, он еще не видел окружающее как определенную систему, он еще не видел движущей силы преобразований. Поэтому в поэзии Маяковского до Октября, вместе с его протестом громко звучат и ноты пессимизма, отчаянья, одиночества, которые отличают его творчество от творчества такого писателя как М. Горький. Именно поэтому мы не можем согласиться с А. Метченко, К. Петросовым, которые называют его дооктябрьскую поэзию активно-романтической или революционно-романтической, или с В. Перцовым, В. Нова-

которым, которые входят в поэзию Маяковского элементы метода социалистического реализма. Мы считаем, что Маяковский до революции был бунтарем, радикалом, который боролся против пассивности людей, и хотел чтобы люди действовали, чтобы люди были активными, хотя бы стихийно.

Хотя Маяковский отличается от других футуристов тем, что в его поэзии звучит социальный протест, этот протест Маяковского носит футуристический характер. Конечно, Маяковский в своей поэзии поднимается на несколько голов выше других футуристов но всё-таки он имеет что-то общее с ними. Бунт футуристов был, в основном, стихийным эстетическим бунтом и он, как отметил М. Горький, говоря о русском футуризме, и А. Грамши, говоря об итальянском футуризме, имел свои положительные, прогрессивные черты. Маяковский переносил этот стихийный эстетический бунт футуристов в социальную область. Маяковский от бунта против господства "бездущных вещей", который можно встретить и в поэзии В. Хлебникова и В. Каменского переходит к бунту против господства денег, закона, религии над человеком и над обществом. Маяковский выступает против тех социальных явлений, которые он считает делают человека пассивным. В этом большую роль сыграли те годы, которые Маяковский провел как член РСДРП (б). Его подготовила подпольная работа и литература, которую Маяковский читал в детстве, но тем не менее, как и другие футуристы, Маяковский был политически незрелым (хотя он разбирался в политике больше, чем другие футуристы) и поэтому до Октября Маяковский не мог видеть марксистского пути к свободе человека. Об этом свидетельствуют ноты пессимизма, отчаяния, одиночества в поэзии поэта в этот период. Об этом свидетельствует отсутствие в его дооктябрьской поэзии таких понятий, как "капиталисты", "рабочий класс", "социализм", "большевики" в прямой или образной форме.

Об этом свидетельствует отсутствие понимания общества, основанного на эксплуатации человека человеком, отсутствие изображения рабочего класса и капиталистов, как двух антагонистических классов. Маяковский хотя и делит мир на "богатых" и на "бедных", но, по нашему мнению, для него это деление мира происходит не на основе места этих людей в процессе производства, а на основе потребления. О политической незрелости Маяковского свидетельствуют и некоторые из февральской революции как революции означающей конец старого общества, начало нового. Важно, что только в условиях после февральской революции Маяковский понял, что для таких изменений, какие он хотел, нужна будет еще одна революция.

Интересно, что ленинскую критику анархизма, в которой говорится об отличии анархизма от научного социализма и которую можно использовать для критики большинства радикальных политических движений и идеологий, можно и использовать для критики социального протеста в дооктябрьской поэзии Маяковского. Эта критика отличает эти идеологии от марксизма, от научного социализма.

Таким образом, хотя социальный протест поэта был радикальным, он всё-таки ограничивался политической неопределенностью, абстрактностью. Процесс политического созревания Маяковского начинается с февральской революции и быстрым темпом развивается после Октябрьской революции, когда он пишет такие поэмы как "Владимир Ильич Ленин" и "Хорошо!", в которых полностью отсутствуют неопределенность и абстрактность в понимании революции, столь характерные для его до-революционного творчества, и общественная борьба рассматривается с марксистских позиций.

6
24.6.96
Foroogh Farrokhzad, her Poetry and Problems
of the Iranian Society

Syed Ainul Hasan

Sup : Dr. (Miss) S.J. Havewalla

FOROOGH FARROKHZAD (1935-1967) was not only one of the most prominent Iranian poets/poetesses but the most controversial one too. Loved by Iranian youths, criticised by her contemporary poets and writers admired by world critics—especially after her death ; Foroogh was not an ordinary poetry composer, nonetheless an ordinary woman. She could think much faster than her compatriots : displayed a rare maturity unexpected from any Iranian woman, and marched ahead towards complete freedom and modernity with such a pace that she left her Iranian brothers and sisters far behind her. As a result she was isolated, lonely and at times depressed ; and yet quite determined not to give up the battle.

She was the poetess and a woman who could be either admired or condemned but not the one who could be ignored or over looked.

Apart from her poetic skill, her unique personality and her contribution to the Iranian society could not be bypassed. This is the reason why I chose to make research not only about her poetry but also about the problems of the Iranian society which she tried to solve in her own way with the medium of her lucid thought—provoking and honest poetry.

Foroogh's personal life has played a very great role in moulding and shaping her poetry as well as personality : so a brief life sketch of Foroogh was necessary as introductory chapter to the thesis. While studying Foroogh's life style it is easier to understand the different stages of her poetry writing and mental and intellectual development.

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Foroogh Farrokhzad was born in Tehran in January 1935. Foroogh's formal education was exclusively at girls' public schools in Tehran: Six years of elementary school, and a brief period of study of painting and sewing at "Banuan Technical School." She never received a high school diploma. At thirteen or fourteen, Foroogh began composing poetry in the traditional ghazal verse form, but she never published any of these ghazals. At sixteen, she married Parviz Shapur, a government employee, who has been a satirist and caricaturist of some local distinction. A year later, in 1952, Foroogh's first collection of verse, called ASEER (The Captive), apparently appeared. The famous collection with the same name but including poems composed in 1952 and after appeared in 1955.

Foroogh's only child, a boy named Kamyar was born in 1953, and shortly thereafter the family moved to Ahwaz where Foroogh's husband had been transferred. Foroogh is still remembered in Ahwaz as a daring young woman, petite, attractive, with beautiful eyes, one of the first women there to wear modern European dresses on the streets. In any case Foroogh's marriage to Shapur dissolved by divorce in 1954, before her twentieth birthday, with Shapur gaining permanent custody of Kamyar.

By the time she returned to Tehran and ASEER (The Captive) appeared in 1955, Foroogh was a well-known literary figure and the subject of some controversy. ASEER featured a preface, cited earlier in another context, by Shujauddin Shafa, who therein addressed himself to the furor over Foroogh's "immorality" and "scandalous" candor. Foroogh's early poems and rumors about her personal life and disregard for traditional mores had an impact upon the reading public. Shafa termed the whole question of "morality" in poetry irrelevant to literary judgement and added that it might be hypocritical as well.

DEEWAR (The Wall), Foroogh's second collection of poems, appeared in 1956, dedicated thusly to her ex-husband.

Foroogh now in her early twenties and well-known in literary circles, was already being acclaimed as only the second woman poet of real or supposed greatness in the history of Persian literature, the other being Parvin Eitesami (1907-1941), whose life and works have already been reviewed many a times.

In 1957 appeared OSYAN (Rebellion), the third collection of poems, which she later characterised. alongwith DEEWAR (The Wall).

as "The hopeless threshing of arms and legs between the two stages in life.....the final gasps of breath before a sort of release".

The thirty-five poems in Forough's fourth collection, TAWALLODI DIGAR (Another Birth), were composed in a period of nearly six years from 1958-1963, and the publication of this volume and subsequent poems truly signalled "another birth" for Forough as a poetess as well as person.

First, the later poems exhibit marked differences in superficial form from Forough's earlier collections. None of the later poems exhibit quatrain stanzas, which constituted the basic formal divisions in her earlier compositions (i.e., of eighty-six poems in her first three collections, seventy-five are series of quatrains). The later poems also exhibit a predominance of verses of unequal length (as opposed to verses of uniform length in terms of quantitative metrical patterns in earlier compositions), an abandonment of regular patterns of end rhyme, and less adherence to traditional patterns of quantitative metres. In these regards, Forough's later poems constitute a departure from traditional verse forms and prosody almost as marked as her earlier break from traditional verse in terms of subject matter and diction. Nevertheless, there persist in Forough's later poems palpable links with the echoes of traditional verse and the Iranian literary past that help give many of these poems a true ring and body, in contrast with the products of some other contemporary Iranian poets that often seem mere grafting of kinds of western verse and modes of thought on to the Persian language. This sort of lack of development of new forms without recourse to and regard for the cultural context from which they spring signals for one critic a lack of depth in much of contemporary Persian verse. But this is an indictment from which Forough's later verse is surely excepted.

Second, Forough's later poems reveal maturity both in command of language and in broadening of concerns and visions. These dimensions of Forough's growth as a poet are easily seen in the many poems from TAWALLODI DIGAR (Another Birth) and the posthumous IMAN BIYAVAREEM BE AAGHAAZ-E-FASLE SARD (Let us have faith in the beginning of the cold season) translated elsewhere, poems such as PARNADEH FAQAT YEK PARANDEH BOOD (The bird was only a bird), HADYAN (Gift), AAYEHA-E-ZAMINI (Earthly gospels), DELAM BARAYE BAGH CHEH MEE SOOZAD (I feel for the garden) MAN AZ TOO MEE MEERAM (I am dying of you), DAR KHIYABAN HAE SARD-E-SHAB (In the cold streets of the night), AI MARZ-E-POR GOHAR (O Bejeweled land), GOL-E-SORKH (Red flower),

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AAN ROOZHA (Those days), ROOY-E-KHAK (Upon the earth) and
BAAD MAARA KHAHAD BORD (The wind will carry us away).

The following brief samples from Foroogh's later poems illustrate
aspect of how they represent of her "Another Birth".

"My heart is heavy, o so heavy.
I move to the porch, and
 extend my fingers over the stretched
 skin of night.
The linking lamps are dark,
 o so dark.
No one will introduce me to the sun, or
 escort me to the celebration of the sparrows.
Bear flight in memory, for the bird is mortal."

(DELAM GERAFTEH AST)
My heart is heavy

For the speaker of this poem all avenues are blocked ; the attempt
to relate to and free oneself from night futile. It is a moment that may
epitomize a whole life or constitute the essence of a life of attempted
love and hopelessness. But, as the following poem reveals, it is not
being alone that is responsible for one's sense of loneliness and futility.

Night comes
and after night, darkness
and after darkness
eyes
hands
and breathing and more breathing
and the sound of water
which drips drips from the faucet
Then two red points
from two lighted cigarettes
the clock's tick-tock
and two hearts
and two lonelinesses.

JOFT
(The Couple)

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Foroogh moves from the vision of hopelessness and despair in DELAM GERAFTHEH AST (My heart is heavy) and JOFT (The Couple) to doubt and possible optimism, respectively, in the next piece, a brief section from the highly regarded title poems of TAWALLUDI DEEGAR (Another Birth).

Though Foroogh was not a shaping force in modern Persian poetry, which formally came into existence in the early 1920's, she, as a second generation modernist, entered an arena where the battle lines between the forces of tradition and innovation and past and present are still drawn and the conflict persists.

As a woman in a predominately Muslim Society, Foroogh's commitment to poetic statements of frankness and self-revelation flies in the face of an equally long standing and just recently challenged tradition of feminine circumspectness, public modesty, and concious avoidance of attention and competitiveness in a male-dominated society. Foroogh may not have been a feminist, but as a free spirit and poet, she was perforce at the forefront of the new consciousness of women in Iran, another continuing conflict of past versus present, religion versus secularism, and traditional mores versus changing attitudes and common sense.

From the prison confines of darkness
 From the turbid cesspool of the world
 Hear my needful clamor,
 O able, unique God.
 Rend this veil of blackness, and
 perhaps you'll see within my breast
 of sin and corruption.
 The heart you gave me, it isn't a heart
 Beating in blood ; free it, or
 keep it empty of carnal desires,
 Or encumber it with affection and fidelity.
 From my eyes snatch
 The eagerness to run to another ;
 O God, have mercy, and teach my eyes
 To shy away from the shining eyes of others.

(DAR BARABAR-E-KHODA)
 (Face to face with God)

DAR BARABAR-E-KHODA (Face to face with God) is not particularly typical of Forough's early poems in its address of God, but its representation of a desperate and longing mood is typical. And, where the emotion and images of romantic imagery of 'face to face with God' are focused on the specific aspects of woman's love for a man, the reader confronts a poetic speaker who is open to the charge of ignoring traditional Iranian bounds of literary decorum and who, as an "I" representing a woman poet, transgresses bounds of traditional social mores as well.

Forough's quest for complete freedom and modernity created lots of problems for her. She never regretted being a woman, but never accepted subjugation of women by male-dominated society. While fighting against injustice to women, she had to start her battle on the other front too. She wanted Iran to be "Modern" but not Europeanised. She hated the hypocrisy of Iranian women who tried to look westernised without making any intellectual and social progress.

She criticised Shah, the ruler of Iran for projecting the false image of Iran. Shah wanted to create another Paris in Iran where majority of the rural masses were quite far away from the urban civilization.

He would try to display the wealth and prosperity of Tehran to the world when rest of Iran was poverty-stricken and hungry. Forough wanted freedom from such sweet dreams too. She was an honest soul who tried to bring awakening and awareness amongst Iranians by portraying the most realistic picture of her nation whom she ardently loved.

She could not tolerate physical exploitation of women by men. She could never be fooled by unending praise of a woman's beauty by poets and authors. She portrayed the real picture of women and their tragic plight in her poetry demanding respect and dignity for them. She made several appeals to women to break unhealthy norms and traditions of the society. Her call for breaking the age-old social norms and traditions was misunderstood and misinterpreted. She was accused of being an immoral woman demanding free-sex society. The tragedy of Forough's life lies in the fact that when she was alive, even women in spite of realising the truth of each and every word of Forough, never appreciated her till she was alive. But after her death everyone suddenly started missing her honesty, integrity and leadership. Today Forough is an ideal for Iranian youths and held in high esteem by critics and intellectuals.

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I have divided my thesis into the following eight chapters to give complete picture of Forough Farrokhzad, her poetry and problems of the Iranian society.

- I. Introduction of Forough.
- II. From Classical to the New Poetry.
- III. Reviewing Forough's Poetry.
- IV. Patriotism and Nationalism in Forough's Poetry.
- V. Comparison between Forough and other contemporary poetesses of Asia.
- VI. Forough's Criticism on the problems and sufferings of women.
- VII. Forough's call for a free and frank society and her severe criticism on sex discrimination.
- VIII. Forough's defiance against the despotic rule of Shah of Iran.

Much has been written about Forough in Iran and abroad but this is perhaps the first thesis submitted on the subject to get a Doctoral Degree.

Problems of Translation German-Marathi

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Sup: Prof. Pramod Talgeri

A translator being a bilingual mediating agent between monolingual communication participants in two different language communities is left unfortunately to fend for himself for want of practical tools except dictionaries. Any translator undertaking this activity is expected to possess competence in translation i.e., he must have knowledge of the people and their culture etc. in addition to an extra-ordinary linguistic competence on the one hand and equal command of target language on the other. Many things are taken for granted under his linguistic and extralinguistic competence. There are additional tools like dictionaries, glossaries etc. available to him. However, it is an open secret that the dictionaries are inadequate tools in certain translation situations. It has been recommended in the past that a translator should always translate from a foreign language into his mother tongue and the knowledge of subject matter is of immense help while executing technical and scientific translations. Broadly speaking the process of translation involves two major steps viz. analysis of SL text to retrieve the information and then the synthesis i.e. recreating the equivalent information in the norm of TL. This means that a translator has to play a double role once as a decoder of the SL text and arrive at meaning₁ in language₁ and then find out the meaning₂ and restructure it in language₂ where he plays the role of encoder.

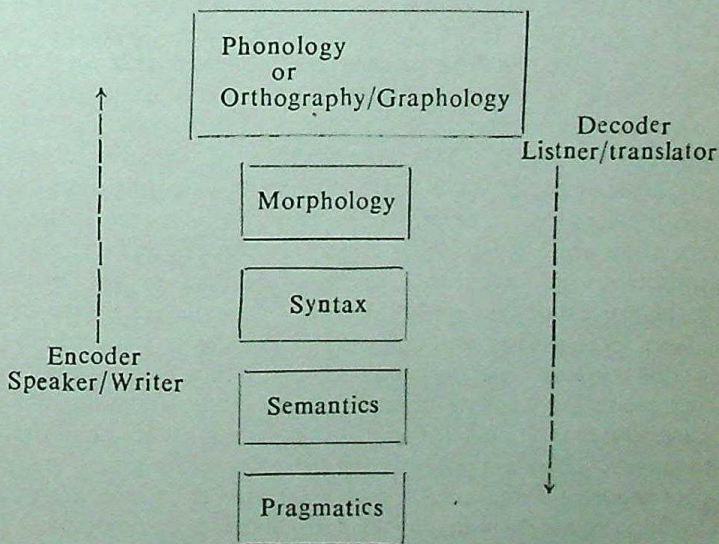
In order to make available to him a practical tool, we have attempted to spell out a theory of segmentation as applicable in the translation process. Although there is a vast literature on translation, an attempt has never been made to study the translation process while translating German into Marathi. Although a few novels, stories and dramas have been translated in Marathi, no literature exists on German-Marathi translation problems. It was felt that it would be an interesting crosscultural study as the problems encountered will be different from

those encountered while translating from German into other European languages.

The real problem of translation lies in the selection of an equivalent from many available translation choices. Every expression in SL has three dimensions at a time viz. the phonetic, syntactic and semantic profile for which a match having all the three profiles is to be chosen in TL. It is always that one of the profiles will be missing which then becomes a handicap for the translator. Although German and Marathi have identical grammatical categorization like nouns, verbs, cases, prepositions, conjunction etc. the expectation would be that there would be less number of translation problems. But in reality it is quite contrary. This can be ascribed to different sentence construction rules, the number of cases available being different in the two languages. In our study we have reviewed the literature on translation extensively, particularly the linguistic approach to translation. Almost all the literature surveyed was a product of specialists dealing with European languages and as such did not have any direct bearing on German-Marathi translations. However, some of the common ideas based on the linguistic aspects of translation were of great utility.

The Theory of Segmentation

Every language has the following structural levels :



The linguistics has provided for phonological, syntactic and semantic analysis i.e., phonological, constituent and compositional analyses respectively. We have proved that the above analytical techniques do not contribute in anyway while translating. The methods of analysis might be having application elsewhere and must not be underestimated.

The transformation generative school believes in the deep and surface structures and the deep structures are only manifested in different surface structures. If we interpret this argument on intralingual level, the surface structures of 'Sein schönes Auto' would be : or hat ein Auto, das Auto ist schön ; er hat/besitzt ein schönes Auto. The thought unit underlying all these expressions is called the deep structure. However, it is difficult to say which one is the deep structure. It also means that there are basic structures or Kernel constructions like, SV, SVE, SVO, SVOO ,SVOOE etc. and with transformation techniques we can arrive at the Kernel forms. To corroborate this we have analysed and translated the basic structures of German sentence constructions. It revealed that the similar segments are not translated by similar syntactic units but identical constructions are to be preferred to keep the TL-usage form intact.

In any study of speech act it can be seen that speaker has a tendency to deliver an utterance in smaller parts with the main consideration of receptive understanding of his speech by the hearer. It is an usual experience that an utterance if not cut at the proper places can lead to misunderstanding or misinterpretation e.g. यशवंतराव चव्हाण. Similarly, even while reading a passage it is observed that such type of segmentation takes place on the basis of meaningful units. The main intention of such segmentation is the clarity of understanding from the view point of a reader. This segmentation of meaningful units is generally based on subject-verb-bond, other units indicating time, manner, place etc. of an action. The present form of any language is the result of an evolution which it has under-gone. The human beings must have communicated with each other in monosyllabics in the beginning. During the process of this evolution the monosyllabics paved way for polysyllabic utterances to accommodate more information content. The basic simple sentence patterns can be blown up into bigger, complicated constructions to avoid repetition and to carry more communication load. Such basic sentence patterns of any language are limited and therefore easy to survey. There are only twenty eight Kernel sentences in German which we analysed syntactically and translated them into Marathi and explained the syntactic units in order to make a comparison. These Kernel sentences can be expanded in complex structures by adding noun

specifications, attributes, supplements and enlargements and subordinate constructions. We found a considerable difference in the collocations, linkages bonds and dependencies which we have tried to ascribe to different way of segmentation of reality.

In no two symbolic systems that is, in no two languages is classification of reality/experience identical. This can be seen from various colour divisions and kinship terms of relations because the segmentation of experiences is different in different languages. Some languages make more distinctions than others out of necessity and no two languages agree completely in types of distinctions. The above argument can be substantiated by the following examples :

- English : I am hungry.
 German : Ich habe Hunger.
 Hindi : (Muze bhuk lagi hai) Hunger is attached to me.
 Marathi : (Mala bhuk lagali aahe)
 E : He smokes a cigarette
 G : Er raucht eine Zigarette
 H : Woh sigret peeta hai (he drinks cigarette).
 M : To sigaret odhato. (He pulls cigarette).
 Bengali : Ami sigret khai. (He eats cigarette).

From the above it is clear that the underlying concept of 'consumption of cigarette' has been the same but the segmentation i.e. the perception and expression of the same is different. All the above sentences have same semantic content but different syntactic structure to bring about the same effect of communication. Therefore, the most important task before the translator was the transfer of the semantantic unit 'consumption of cigarette', which happens to be the main thought unit. Such basic thought unit as expressed by the syntactic units in each sentence is the archisegment. An archisegment is a syntactic representation of semantic unit which is the carrier of the minimum information content in a sentence. Such a unit of archisegment is given in a dictionary in its syntagmatic form. However, in concrete sentences the same is available in a peculiar paradigmatic relation and a translator has to abstract it on its syntagmatic form to gain more manoeuvrability later. The concept of archisegment is no doubt based on valency of a verb, which permits a translator to look for vacant places around the concerned verb. The translator obtains the minimum essential information from an archisegment of SL sentence, then arrives at the equivalent

information₂ on the basis of his TL competence and encodes the information₂ in the TL syntactic units. The other additional information structured in the SL sentence can be analysed with the help of macrosegments or microsegments. All the macrosegments will have their syntactic representation of a single semantic unit. In other words the additional information in a sentence will be given with the help of macrosegments which will be a conglomeration of more than one word to represent a single semantic unit like attributes, supplements, enlargements and phrases etc. Sometimes due to lack of longer specifications and supplements the above information may be found in a microsegment which will always be represented by a single word. In addition to the above German sentences show fused as well as discontinuous segments. There are sometimes bound or free segments for inclusion of more information in sentences.

Translation of complex sentence structures is only possible with the analytical understanding of the language. We have tried to throw sufficient light on the constructions involving archisegments which falls basically in the province of production grammar i.e. stepwise construction of simple model sentences based on segments. This, in turn, is the basic competence of a translator. Signal grammar signifies nothing more than the process of decoding these segments (word order, particles, suffix etc.) Thereby the signals which are a subconscious guide in reading to those who master the language, should be identified and categorised. ... We noticed that the number of rules and the number of basic syntactic forms, according to which the elementary patterns of a language are produced, are limited. Similarly the number of signals which have to be identified while reading is limited. Their function is to indicate the relationship and interdependence of word groups (segments). It is these signals that demarcate the logical structure of a sentence and thereby supply the information.

We have seen that the first step in the decoding of a message begins when we start to reduce the complicated long sentences into simple sentence units to retrieve first the minimal important information on the basis of archisegments. Here the rules we learnt for formulating the minimal or kernel sentences serve as signals for splitting up complex sentence structures. An attempt is made to split up the sentence into segments according to the thought unit contained in it, and their syntactic relationship is indicated by the grammar. Other segments indirectly dependent on the verb can be placed appropriately in the second step. The third step would be to weigh the available equivalents on different parameters which is the last phase of translation viz. Synthesis.

The parameters which gave us the textual profile of the SL text will guide us in selecting the appropriate equivalents. There are then two main considerations 1. semantic and 2. syntactic choices. The semantic choices will depend upon the non-linguistic considerations like cultural filter, region, time, etc. of the original text and the syntactic choices will be guided by the SL construction techniques used for style. We can foresee that there cannot be total equivalence on this aspect because of the nature of the two languages. Sometimes a congruence can be achieved to a great extent but in world-building and subordinate constructions the things are going to be different.

It can be seen that the second step suggested above poses the crux of the translation process on which very less concentration of study has been done. The rules of structures, rule mechanism, dependencies and combinability of elements help us in decoding the linguistic meaning with the help of signal grammar. It is well known that words establish bond with only certain other word groups and the very selection of verbs entails definite sentence structures. On the basis of internalised grammar system, according to which words can be combined to form sentences, phrases, clauses and even specifications, the translator gets indications of signals starting from word-building to interdependencies which assist him in decoding. The pivotal function belongs to the verb as the sentence structure is determined by it, and the meaning and syntax are well knit. The valency of a verb generates predictability or expectancy and a search for the vacancies commences and dependencies are resolved to get at the minimal meaning. However, every noun is capable of adding pre and post-nuclear specifications. This means that every sentence is structured in a hierarchy and needs segmentation at appropriate nodes. Segments are the primary structural elements of the simple verb-sentence. The verb group (V) is the central segment of the sentence N (the 'subject' or as the case may be, the nominative object of the sentence), and in many cases O (object completion) depend on V.

Further, there are segments which are either only indirectly dependent on the verb or which can be added on as free segments. V, N, O and E (enlargement) are thus the primary structural elements to which all sentences can be reduced by transformations, if necessary. It may be kept in view that there exists a possibility of expansion of the noun group on the basis of the primary syntactic rules. The use of prepositions and cases (function indicators) show relationships between the segments of sentences.

Sentences—especially in German—become nuclear because of the specifications of the noun group and the segments, which in the form of enlargements and secondary clauses blow up basic patterns into gigantic sentences. They attach themselves to the basic segments N-V-O, in a manner comparable to the binding of molecules. We must consider all subordinate clauses as full sentences with changed word order. There is always a tendency to translate subordinate clauses by phrases in Marathi although a possibility of translating the same with matching subordinate Marathi construction cannot be ruled out.

Since translation which handles language in use, is concerned with instances of *acts of speech* (including writing), considerations of illocutionary force or pragmatic meaning are of great importance for translation. In effect, translation operates not with sentences but with utterances, i.e., units of discourse characterized by their use-value in communication. In translation, it is always necessary to aim at equivalence of pragmatic meaning, if necessary at the expense of semantic equivalence. Pragmatic meaning thus overrides semantic meaning. We may, therefore, consider a translation to be primarily a pragmatic reconstruction of its source text. When we accept that a text is a linkage of sentences into a larger unit then the rheme and rheme have to be invariant in the new language.

Various relations of co-textual reference take place in the process of text constitutions e.g. occurrence of pro-forms, substitutions, co-references, ellipses, anaphora and these account for the textual meaning. When we expect a semantic pragmatic equivalence in the translation we mean that the function of the source text and translated text must be identical or equivalent. We must be clear about the functions of language and those of a text. The following have been listed as the functions of language.

1. Symbolication of reference,
2. expression of attitude to listener,
3. expression of attitude to referent,
4. promotion of effects intended,
- 5 support of reference.

Foregrounding is a linguistic device for making the reader conscious of a particular linguistic form such that the linguistic form itself attracts attention, and is felt to be unusual or "de-automatized" (as in the case,

for instance, in alliteration, assonance, onomatopoeia, puns, and word-plays). *Automization* is the opposite of foregrounding i.e., a conventional, "normal" use of the devices of language such that linguistic form themselves do not attract attention.

That means the level of phonology plays a role while making the translation of prosodic devices. We will have to distinguish three textual aspects. 1. theme-dynamics i.e., in other words theme and rheme which means known information and new given information respectively. And this should not pose any possible problems of translation at all. 2. Clausal linkages are additive, adversative, alternative casual, explanatory or illative relations. These have been mentioned in the grammar studies in this work where the contrastive-confrontative approach has been made to the two grammars of German and Marathi. 3. Iconic linkage occurs when two or more sentences in a text cohere because they are, at the surface level, isomorphic, e.g, Chomsky's famous pair *John is easy to please* and *John is eager to please* are cases of iconic linkage or structural parallelism.

House advocates textual analysis of SL-text according to a set of eight dimensions, three language user dimensions (Geographical origin, Social class, Time), and five language use dimensions (Medium, Participation, Social, role Relationship, Social Attitude, Province) for which linguistic (syntactic, lexical and textual) correlates are established (in the TT).

Under geographical origin we are to understand the regional dialect. We are of the opinion that the translations should be executed in the standard language alone. Standard language means the one used in the mass media like newspapers, radio or television. The question of obtaining equivalence on this dimension comes in question only when a lot of translation activity has already taken place in German and Marathi, which is not the case, and there will not be any parallelism. The dimension of social class is very important in the translations because it encompasses the social class dialect based on rich, poor; rural, urban; landlords, farmers, and backward classes etc. who use a particular register of language. The third dimension viz. that of time is important only when historical works are the subject of translation. The synchronic translation will lead the readers to confusion because the distance in time is much more. Only those who have the aim to study the evolution of a language may be interested in this. It is, therefore, advisable that attempt may always be made to accomplish diachronic translations. By medium we are to understand the language whether

it is written, spoken, high, medium, low, slang or specialists language. The segmentation on this level is also essential to create or retain the same climate as the original. This also includes the analysis of theme-rheme sequence, subjectivity of style and redundancy. Under participation we understand the presentation of the text in direct or indirect narration, specific use of pronouns, imperatives, interrogatives, exclamations and parentheses etc. However this information falls under the invariables in translation. Under social role relationship we have to decide the role relationship between the addresser and addressee. This will have parameters like authority, age group, equality, officialdom and family membership. Under the dimension social attitude we understand the attitude of the text producer towards the communication like : frozen, formal, consultative, casual and intimate. Under the dimension of province we are to understand the form of the communication which should not normally change. The forms of texts can be letter, essay, poetry, prose, monologue, etc. The above parameters help a translator in segmenting the text to be translated extralinguistically and to achieve equivalence at the rank in the TL. Even after segmenting text semantically, syntactically and extralinguistically there will be some situations where perfect equivalence cannot be achieved. This then can be ascribed to the cultural difference and here we suggest that circumlocutory, paraphrastic or explanatory translation techniques will have to be adopted. However, where possible, it is advisable to recast the SL situation in a similar or comparable situation in the TL.

In the translations across cultural boundaries following points will determine the equivalence to create the same effect on the readers of translation.

1. Ecology : This includes the physical environment, climate, topography, flora and fauna from which the native language is influenced. The sun will be a welcome sign in Germany, however the same is not so in a tropical country like India. The cold, shadow and the words like these will have to be used to get the same effect. The names of flowers, birds which have no equivalents due to this factor will have to be substituted by the birds or flowers as seen in India or in Maharashtra.
2. Social factor Will include institutions like marriage, educational system ancient and modern, social strati-

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fication (Caste system), politics, historical experience, games etc.

3. Scientific technological

Material well-being, scientific and technological knowledge, industry and agriculture from which expressions and words pour into the general vocabulary of a language. Particularly in Marathi this is not direct because the medium of instruction is English and therefore, English scientific and technical terms are widely used as such in Marathi texts.

After applying the theory of segmentation and the above eight dimensions to both SL text and TL translation we will obtain a textural profile which can be called as "Rohübersetzung" and then last step of the translation procedure would be that of synthesis to prepare "druck-reife Übersetzung".

While comparing the grammatical systems of German with Marathi at every step we felt that every item can be studied in depth for establishing grammatical and semantic equivalence. An exhaustive study on German Marathi pronouns, nouns and other parts of speech can be undertaken to decide the linguistic behaviour of these parts of speech vis-a-vis Marathi and vice-versa. It is felt that the universities should encourage interlingual translations for the enrichment of both the languages. Valuable inferences can be drawn from the published translations in plenty and after a great deal of translation activity readymade equivalent expressions can be available. But before any translation activity is undertaken the basic tools like dictionaries will have to be prepared. The syntax of both the languages can be a topic of independent research.

जवाहरलाल नेहरू और आधुनिक हिन्दी साहित्य

श्री भगवान सिंह

निर्देशक : प्रो० नामवर सिंह

आधुनिक हिन्दी साहित्य का विकास भारतीय नव जागरण एवं राष्ट्रीय आंदोलन के विकास के समानान्तर हुआ है। उन्नीसवीं शताब्दी में जिस सामाजिक-धार्मिक सुधार-आंदोलन का आरम्भ हुआ वह कालान्तर में सांस्कृतिक जागरण में रूपान्तरित हो गया और यह सांस्कृतिक जागरण ही राष्ट्रीय स्वाधीनता आंदोलन की पृष्ठभूमि बना। भारतेन्दु युग से विकसित होनेवाले हिन्दी साहित्य की विशेषता रही कि उसने समाज के साथ जुड़ कर चलना शुरू किया और इस क्रम में सामाजिक-धार्मिक सुधारों का स्वर उसमें मुखरित होने लगा। जैसे-जैसे राष्ट्रीय चेतना निखरने लगी, वह हिन्दी साहित्य में प्रतिबिम्बित होने लगी। बीसवीं शताब्दी में राष्ट्रीय चेतना और गहराने लगी और उसी अनुपात में वह साहित्य में भी अभिव्यक्त होने लगी। तब से 1947 तक हिन्दी साहित्य राष्ट्रीय स्वाधीनता संग्राम के विभिन्न पक्षों को वाणी देते आया।

इस क्रम में हिन्दी साहित्य में सामाजिक, राजनीतिक, आर्थिक, सांस्कृतिक आंदोलनों का, कभी प्रत्यक्ष ढंग से, तो कभी प्रच्छन्न ढंग से स्मांकन हुआ ही; साथ ही इन आंदोलनों को प्रभावित करने वाले महत्वपूर्ण व्यक्तियों के व्यक्तित्व से भी उसकी सृजनात्मकता प्रभावित हुई। बीसवीं शताब्दी के तीसरे दशक से महात्मा गांधी सम्पूर्ण भारतीय जीवन में एक महान राष्ट्रनायक के रूप में छा गये और तब से हिन्दी साहित्य में बहुत कुछ उनके विचारों-कार्यों के इर्द-गिर्द लिखा गया और यही कारण है कि हिन्दी साहित्य में महात्मा गांधी के प्रभाव को लेकर अनेक शोध-कार्य भी हुए हैं।

महात्मा गांधी की तरह ही अपने विचारों एवं कार्यों से हिन्दी साहित्य पर प्रभाव डालने में समर्थ अन्य व्यक्ति हुए उनके शिष्य जवाहरलाल नेहरू। तीसरे दशक के अन्त तक जवाहरलाल नेहरू अपने राजनीतिक कार्यों एवं विचारों के कारण भारतीय राजनीति में एक राष्ट्रीय स्तर के जननायक बन गये और उनके इस व्यक्तित्व की प्रतिच्छाया हिन्दी के बहुत सारे रचनाकारों के लेखन पर पड़नी शुरू हो गई जो उनके पार्थिव अवसान के उपरान्त भी जारी है। यानी, स्वाधीनता संग्राम में तथा स्वतंत्र भारत के नव-निर्माण में महत्वपूर्ण भूमिका निभाने वाले एक महान राष्ट्रनायक के रूप में जवाहरलाल नेहरू ने राजनीतिक जीवन में जो प्रभाव कायम किया, उससे हिन्दी साहित्य अछूता नहीं रहा।

हिन्दी साहित्य के संदर्भ में नेहरू के इस बहु आयामी प्रभाव का अनुशीलन करना ही इस शोध-प्रबंध का प्रतिपाद्य है।

भारतीय जन-जीवन में जवाहरलाल नेहरू की जो विशिष्ट पहचान बनी वह मुख्यतः उनकी राजनीतिक गतिविधियों के कारण ही। 1920 में उन्होंने अवध प्रदेश के किसान-आंदोलन में भाग लिया, 1923 में नाभा रियासत में जाकर गिरफ्तारी दी, 1923-25 के बीच इलाहाबाद नगरपालिका के अध्यक्ष के रूप में उन्होंने अपनी प्रशासनिक दक्षता का प्रमाण दिया, 1927 में ब्रसेल्स सम्मेलन में भारत का प्रतिनिधित्व कर अन्तर्राष्ट्रीय जगत् में प्रसिद्धि अर्जित की, 1927 में सोवियत संघ की यात्रा कर वे समाजवादी उपलब्धियों से प्रभावित हुए और अपने देश में तब से समाजवादी विचारों का प्रचार करने लगे, 1929 में वे लाहौर कांग्रेस का अध्यक्ष चुने गए और अध्यक्षीय मंच से उन्होंने अपने को समाजवादी घोषित किया। ये ऐसी गतिविधियां थीं जिनकी बदौलत नेहरू भारतीय राष्ट्रीय कांग्रेस में वामपंथी विचारधारा के प्रवक्ता समझे जाने लगे और वे तमाम तरफकी पसंद ख्याल वालों के हृदय-सम्राट बन गये। अपने इस राजनीतिक उत्कर्ष के कारण ही नेहरू समकालीन साहित्य जगत् का ध्यान आकृष्ट करने में समर्थ हो सके। अतएव “भारतीय राजनीति में जवाहरलाल नेहरू का अभ्युदय” नामक पहले अध्याय में पूरे तीसरे दशक की नेहरू से जुड़ी उन घटनाओं का पृष्ठभूमि के रूप में उल्लेख किया गया है जिनकी बदौलत भारतीय राजनीति में नेहरू की विशिष्ट पहचान बनी।

राजनीति में नेहरू ने जो प्रभाव कायम किया, उससे हिन्दी साहित्य-जगत् का ध्यान भी उनकी तरफ आकृष्ट हुआ। दूसरे अध्याय में नेहरू के राजनीतिक अभ्युदय की हिन्दी साहित्य पर जो प्रतिच्छाया पड़नी शुरू हुई, उसका विवेचन प्रेमचंद के विशेष संदर्भ में किया गया है। कुछ लोग इस तथ्य को रेखांकित करते आ रहे हैं कि प्रेमचंद गांधीवादी उमूलों के कायल थे; तो कुछ लोगों द्वारा यह प्रमाणित किया जाता है कि प्रेमचंद गांधीवाद की अपेक्षा मावसवादी जीवन-दृष्टि से अधिक प्रभावित थे और अपने जीवन के अंतिम समय में वे पूर्णतः मावसवादी नजरिये से चीजों को देखने-समझने लगे थे। इस अध्याय में अनेक प्रमाणों के आलोक में यह सिद्ध करने का प्रयास किया गया है कि प्रेमचंद के सोच पर जवाहरलाल नेहरू के विचारों का भी काफी प्रभाव पड़ा था। कांग्रेस में नेहरू ऐसे दबंग नेता के रूप में उमरे जिन्होंने कांग्रेस द्वारा चलाये जा रहे राष्ट्रीय आंदोलन में राजनीतिक स्वाधीनता के साथ-साथ आर्थिक-सामाजिक पक्षों को सम्मिलित करने पर जोर देना शुरू किया। समाजवाद एवं गणतंत्र को अपना लक्ष्य घोषित करने वाले नेहरू ने प्रेमचंद जैसे लेखक को आकृष्ट किया, क्योंकि वे भी (प्रेमचंद) राष्ट्रीय आंदोलन के लक्ष्य को राजनीतिक स्वाधीनता की प्राप्ति तक सीमित नहीं रख कर, आर्थिक-सामाजिक परिवर्तनों तक विस्तार करना चाहते थे। प्रेमचंद की कहानी, उपन्यास एवं अनेक लेखों से उद्धरण देकर उनके सोच पर पड़ रहे नेहरू के सोच के प्रभाव को प्रमाणित किया गया है।

तीसरे दशक से हिन्दी साहित्य में जहाँ प्रेमचंद द्वारा यथार्थवाद का उन्नयन हुआ, वहाँ ठीक उसी समय से छायावादी काव्यधारा का भी आगमन हुआ। कल्पना-प्रवणता के लिए प्रसिद्ध छायावादी काव्यधारा ने भी युगीन यथार्थ-राष्ट्रीय मुक्ति की चेतना—को वाणी दी। अतः तीसरे अध्याय में छायावाद से जुड़े प्रसाद, निराला, पंत जैसे कवियों के संदर्भ में नेहरू के प्रभाव का विवेचन किया गया है। छायावादी कवियों में नेहरू को लेकर प्रशंसा-आलोचना का सबसे अधिक भाव निराला साहित्य में प्रकट हुआ है, निराला के नेहरू संबंधी दृष्टि-कोण का अधिक विस्तार से विश्लेषण किया गया है।

यथार्थवादी कथाकार प्रेमचंद एवं छायावादी कवियों के अतिरिक्त उस समय ऐसे कवि भी काफी संख्या में थे जो न प्रेमचंद की तरह राष्ट्रीय आंदोलन को आर्थिक परिप्रेक्ष्य में देखते थे, न ही छायावादी कवियों की तरह भावावेश सम्पूक्त थे। ये ऐसे राष्ट्रवादी कवि थे जो स्वाधीनता के प्रश्न को बहुत कुछ भावात्मक दृष्टि से देखते समझते थे उनकी दृष्टि गुलामी से मुक्ति के लक्ष्य तक सीमित थी। अतएव राष्ट्रीय स्वाधीनता-संग्राम में अपनी बहुमूल्य सेवाएँ अर्पित करने वाले जवाहरलाल नेहरू उनकी दृष्टि में गीतम बुद्ध, कृष्ण, अर्जुन सदृश्य प्रतीत होने लगे। चौथे अध्याय में ऐसे कवियों के संदर्भ में ही नेहरू के प्रभाव का विवेचन किया गया है।

पाँचवाँ अध्याय है “प्रगतिशील आंदोलन और नेहरू”। विदित है कि 1936 तक हिन्दी में छायावाद का पर्यवसान होने लगा और उसी समय प्रगतिशील आंदोलन आरम्भ हुआ। प्रगतिशील विचारधारा के लेखकों ने जनता के लिए साहित्य लिखने पर जोर दिया। नेहरू भी साहित्य के संबंध में ऐसे ही विचार रखते थे और उन्होंने संघर्ष एवं सामाजिक परिवर्तन की प्रक्रिया को तेज करने वाले साहित्य-लेखन का समर्थन किया। इस विचार-साम्य के कारण ही प्रेमचंद ने सज्जाद जहीर को लिखे पत्र में प्रगतिशील लेखक-संघ के समापत्तित्व के लिए जवाहरलाल नेहरू को “एकदम उपयुक्त” व्यक्तित्व माना था। इसके अतिरिक्त प्रगतिशील आंदोलन के मुल्कराज आनंद, सज्जाद जहीर, के० ए० अब्बास, जैसे प्रणेताओं के नेहरू से व्यक्तिगत संबंध थे। अतः इस अध्याय में नेहरू और प्रगतिशील लेखकों के आपसी आकर्षण का विवेचन किया गया है।

राष्ट्रीय जागरण का एक पक्ष था एक राष्ट्रीय भाषा को प्रतिष्ठित करना। भारतीय नवोत्थान के अग्रधावक राजा राम मोहन राय के समय से ही एक राष्ट्रीय सम्पर्क-भाषा के रूप में हिन्दी को संकेतित किया जाने लगा था। केशवचंद्र सेन, दयानंद सरस्वती, लोकमान्य तिलक आदि ने इस दृष्टि से हिन्दी का समर्थन किया। बीसवीं शताब्दी में महात्मा गांधी ने इस काम को और आगे बढ़ाया। इस मसले की अहमियत को जवाहरलाल नेहरू ने भी महसूस किया और उन्होंने हिन्दी तथा अन्य भारतीय भाषाओं की समस्या पर अपने सुझावों द्वारा लोगों का ध्यान आकृष्ट किया। उन्होंने भी राष्ट्रीय सम्पर्क-भाषा के रूप में हिन्दी का समर्थन किया एवं हिन्दी साहित्य के उन्नयन पर जोर

दिया। छठे अध्याय में नेहरू के हिन्दी भाषा एवं साहित्य के संबंध में विचारों एवं कार्यों का विवेचन किया गया है।

इस प्रकार स्वाधीनता आंदोलन के दौरान जवाहरलाल नेहरू ने अपनी देशभक्ति, त्याग, समाजवादी विचारों तथा भाषा-साहित्य के संबंध में दिये गए सुझावों द्वारा उस काल के लगभग सभी छोटे-बड़े लेखकों का ध्यान आकृष्ट किया और बहुत हद तक उनके लेखन को प्रभावित किया। इन सबका विवेचन छह अध्यायों तक किया गया है।

नेहरू के व्यक्तित्व एवं कृतित्व का दूसरा चरण स्वाधीनता प्राप्ति के बाद शुरू होता है। जब वे प्रधानमंत्री के रूप में स्वतंत्र भारत के निर्यात संचालक बने। इस दौर में जहाँ कुछेक लोगों का नेहरू से मोहभंग होने लगा, वहाँ अनेक लोगों पर नेहरू का प्रभाव और गहराने लगा। नेहरू ने भारत के आधुनिकीकरण के लिए उद्योग, कृषि, तकनीक आदि के विकास हेतु जो नीतियाँ अपनायीं, जनतांत्रिक, समाजवादी, धर्मनिरपेक्ष मूल्यों को सुदृढ़ करने के लिए जो कुछ किया एवं शीत-युद्ध से ग्रस्त अन्तर्राष्ट्रीय जगत् में तनाव-शैथिल्य तथा शांति-सद्भावना का माहौल स्थापित करने में अपनी असंलग्नता की नीति का अवलम्बन कर जो महत्त्वपूर्ण भूमिका अदा की—उन सबका उस काल के साहित्य-लेखन पर जबर्दस्त प्रभाव पड़ा। अतः “स्वातंत्र्योत्तर हिन्दी साहित्य और नेहरू” शीर्षक सातवें अध्याय के छठे दशक में हिन्दी साहित्य की सर्जनात्मकता पर नेहरू के विविध पक्षों के पड़ने वाले प्रभाव का विस्तार से विवेचन किया गया है।

आठवाँ अध्याय है—“हिन्दी समीक्षकों की दृष्टि में नेहरू का प्रभाव।” हिन्दी साहित्य पर नेहरू के प्रभाव का हिन्दी के कुछेक महत्त्वपूर्ण समीक्षकों ने किस रूप में मूल्यांकन किया है, इसका विवेचन इस अध्याय में किया गया है। इसके अतिरिक्त, छायावाद से लेकर नयी कविता तक की हिन्दी साहित्य की प्रवृत्तियों का विश्लेषण करने में अनेक समीक्षकों ने नेहरू के लेखन का जो उपयोग किया है, उसका भी उल्लेख इस अध्याय में किया गया है।

अंतिम अध्याय है “नेहरू-युग का अंत और नैरन्तर्य”। 27 मई 1964 को नेहरू की जीवन-लीला समाप्त हो गई, लेकिन यह उनके पार्थिव शरीर का अवसान था, न कि उनके विचारों एवं कार्यों का। नेहरू युग-का अन्त हो गया, परन्तु उन्होंने जीवन पर्यन्त देश में जिन समाजवादी, जन-तांत्रिक, धर्मनिरपेक्ष मूल्यों को स्थापित करने एवं विश्व में शांति-सद्भावना का माहौल कायम करने के लिए जो ऐतिहासिक कार्य किए, उनमें उत्तरोत्तर सहमना लोगों की आस्था बढ़ती गई और साहित्य में नेहरू के ऐसे विचारों एवं कार्यों की अनुगूँज बनी रही। अतः इस अध्याय में 1964 के बाद नेहरू के विचारों एवं कार्यों से अनुप्रेरित होकर हिन्दी साहित्य में जो कुछ लिखा गया है, उसका विवेचन किया गया है।

इस प्रकार शोध-प्रबंध नवें अध्याय के बाद उपसंहार के साथ समाप्त होता है। अन्त में दो परिशिष्ट दिये गए हैं। पहले परिशिष्ट में नेहरू को विषय बना कर हिन्दी की नाटक, खंड काव्य, महाकाव्य, उपन्यास आदि विद्याओं में लिखी गई रचनाओं की सूची उनके संक्षिप्त परिचय के साथ दी गई है। दूसरे परिशिष्ट में हिन्दी के कुछ वरिष्ठ कवियों द्वारा नेहरू पर लिखी गई कविताओं की सूची दी गई है।

इस शोध-प्रबंध में हिन्दी साहित्य के संदर्भ में नेहरू के प्रभाव का विवेचन जिस मान्य पद्धति के अन्तर्गत किया गया है वह यह है कि सामाजिक-राजनीतिक विकास के साथ साहित्य के विकास का सापेक्ष संबंध होता है—साहित्य प्रवृत्तियों का अभ्युदय एवं विकास समाज-राजनीति की क्रोड में होता है, अतः सामाजिक-राजनीतिक संघटनाओं की प्रतिच्छाया साहित्यक अभिव्यक्ति का अनिवार्य अंग हुआ करती है। इस क्रम में सामाजिक-राजनीतिक घटना-चक्रों को प्रभावित करने वाले युग-पुरुषों के व्यक्तित्व से भी साहित्यिक चेतना प्रभावित होती है। मुख्य रूप से अपने राजनीतिक विचारों एवं कार्यों के कारण ही नेहरू ने साहित्य-जगत् का ध्यान आकृष्ट किया। ध्यातव्य है कि हिन्दी साहित्य पर नेहरू का जो भी प्रभाव पड़ा है वह उनके महत्वपूर्ण राजनेता, राष्ट्र-नायक एवं विचारक के रूप में; न कि एक हिन्दी लेखक के रूप में।

यह संकेत कर देना भी आवश्यक है कि इस शोध-प्रबंध में प्रयुक्त “आधुनिक हिन्दी साहित्य” का अभिप्राय बीसवीं शताब्दी के तीसरे दशक से शुरू होनेवाले साहित्य लेखन से है; यानी इसी समय से भारतीय राजनीति में नेहरू का अभ्युदय होता है और तभी से उनका प्रभाव हिन्दी साहित्य लेखन पर पड़ना शुरू होता है।

यह है शोध-प्रबंध का संक्षिप्त सारांश। शेष बातों की जानकारी के लिए शोध-प्रबंध की राह से गुजरना अपेक्षित है।

आचार्य रामचन्द्र शुक्ल और भारतीय काव्यशास्त्र की परम्परा

श्रीमती कमला यादव

निर्देशक : प्रो० बी० एम० चिन्तामणि

प्रस्तुत शोध-प्रबंध में आचार्य शुक्ल के काव्यशास्त्रीय चिन्तन का समीक्षात्मक अध्ययन समाजशास्त्रीय एवं ऐतिहासिक दृष्टिकोण को दृष्टिपथ में रखकर किया गया है। इसके लिए तत्कालीन सामाजिक-आर्थिक-राजनीतिक परिस्थितियों का अलग से विस्तृत विवरण देने के स्थान पर उनकी कृतियों के अन्तः साक्ष्य पर ही विशेष बल दिया गया है। कृतियों के आधार पर उनकी परंपरागत मान्यताओं एवं तत्कालीन उपनिवेशवाद, सामन्तवाद एवं स्वाधीनता संघर्ष को दृष्टिपथ में रखकर उनके अन्तर्विरोध, संवेदनशील एवं समन्वयात्मक दृष्टिकोण को दर्शाया गया है।

प्रत्येक रचनात्मक अथवा सैद्धांतिक कृति का समसामयिक जीवन-जगत् से अनिवार्य संबंध होता है। सिद्धान्तकार अपने समय की आवश्यकताओं, आकांक्षाओं एवं रुचियों के अनुरूप पुराने सिद्धान्तों का पुनर्मूल्यांकन करता है और नए सिद्धान्तों का निर्माण। इन सिद्धान्तों की सत्यता स्थापित करने के लिए उनका व्यावहारिक उपयोग कर परख भी करता है। सिद्धांतों के पुनर्मूल्यांकन एवं नवीनीकरण में निश्चय ही सिद्धांतकार के अपने जीवन-मूल्य, विचारधारा एवं पक्षधरता महत्वपूर्ण भूमिका निभाते हैं। प्रत्येक कृति का संबंध इस जीवन-जगत् से सम्बद्ध होता है और युग की परिस्थितियां अपनी संपूर्ण विषमता, विडम्बना, आशा-आकांक्षा एवं अन्तर्विरोधों के साथ उसकी कृति में अभिव्यक्ति पाती हैं। रचनाकार की विचारधारा एवं कृति से उभरने वाली विचारधारा में सामन्जस्य अथवा विरोध का संबंध हो सकता है। अतः कृति से उभरने वाली विचारधारा एवं अभिव्यक्ति जीवनमूल्य अधिक महत्वपूर्ण होते हैं। रचनाकार के अपने दृष्टिकोण में परिवर्तन भी संभव है, अतः समग्रता में रचनाकार की विचारधारा को समझने के लिए आवश्यक है कि उसकी संपूर्ण कृतियों का अवलोकन किया जाय।

आधुनिक हिन्दी साहित्य जगत् के आलोक स्तंभ आचार्य रामचन्द्र शुक्ल (1884 से 1941 ई०) एक प्रखर आलोचक, इतिहास मर्मज्ञ के साथ-साथ एक सिद्धांतकार भी थे, जिन्होंने संपूर्ण भारतीय काव्यशास्त्रीय परंपरा का समसामयिक जीवनमूल्यों, विचारों एवं आवश्यकताओं के अनुरूप मूल्यांकन किया और बाध्य को यथार्थ जीवन-जगत् से सम्बद्ध करते हुए तदनुरूप अपने काव्य-सिद्धांतों का निर्माण किया। वस्तुतः आचार्य शुक्ल

स्वच्छन्दतावादी काव्यधारा की देन थे। वह शास्त्रीय एवं स्वच्छन्दतावादी दोनों प्रकार की कविता की शक्ति और सीमाओं से परिचित थे एवं अतीत के प्रति आलोचनात्मक दृष्टि रखते थे।

साहित्य में स्वाधीन चेतना की जो नींव भारतेन्दु युग में पड़ी थी, वह शुक्ल जी में विकसित एवं संश्लिष्ट रूप में दिखाई पड़ती है। उन्होंने हिंदी-भाषा का संबंध जातीयता से सम्बद्ध किया। जिस देश की अपनी भाषा एवं साहित्य समृद्ध न हो, वह देश निजी पहचान नहीं बना सकता और न उन्नति कर सकता है। शुक्ल जी यूरोप के अन्धानुकरण के पक्ष में नहीं थे। यही कारण है कि जहाँ उनके लेखन में पाश्चात्य साहित्यिक विचारधाराओं की सीधी टकराहट है, वहीं उनके साहित्य सिद्धांतों में पाश्चात्य की अनुगूंज भी सुनाई पड़ती है, किंतु पूर्णतः भारतीय परिवेश में ही। उन्होंने बड़े मनोयोग, परिश्रम एवं निष्ठा के साथ साहित्य संबंधी सुसंगत दृष्टिकोण के निर्माण का प्रयत्न किया, जिसका आधार नैतिकवादी सिद्धांत है।

संस्कृत भाषा में भरत मुनि से लेकर पंडितराज जगन्नाथ तक काव्यशास्त्र की विशाल परंपरा रही है, जिसमें काव्य संबंधी सूक्ष्म, गंभीर एवं व्यापक चिंतन हुआ है, लेकिन संस्कृत साहित्य के उत्तरकाल में अलंकारप्रियता को बढ़ावा मिला। हिंदी रीतिकालीन साहित्य का साक्षात्कार इसी उत्तरकालीन ह्रासशील परंपरा से हुआ। रीतिकाल में लक्ष्य-लक्षण-ग्रंथों की भरमार हुई और रचना बंधी-बंधाई प्रणाली में होने लगी। इस रीतिवाद का विरोध भारतेन्दु-युग से ही प्रारंभ हो गया था, जो द्विवेदी-काल में और भी परिपक्व हुआ, किंतु संश्लिष्ट रूप में साहित्यिक मूल्यांकन के मानदण्ड उभरकर सामने न आ सके। नवीन रचनाशीलता के लिए संस्कृत या रीतिकालीन मानदण्ड पर्याप्त नहीं थे। इस आवश्यकता की पूर्ति शुक्ल जी ने की।

शुक्ल जी के काव्यशास्त्रीय चिंतन की वह कौन सी मूल दिशा है, जिसके कारण वे आज भी इतने महत्त्वपूर्ण एवं प्रासंगिक हैं? आखिर उनके चिंतन में वे कौन से मूलभूत तत्त्व हैं, जो उनके विरोधियों को भी स्वीकार करने के लिए बाध्य करते हैं? उन पर पाश्चात्य मनोविज्ञान के अनुकरण का भी आरोप लगाया गया। कुछ चिन्तकों को वे नवीनता के विरोधी दिखाई दिये, तो कुछ लोगों को वह कलावाद का विरोध करते-करते कलावादी प्रतीत हुए। अन्य को ब्राह्मणवादी एवं एकांगी समाजशास्त्री प्रतीत हुए। ऐसी स्थिति में शुक्ल साहित्य एवं चिंतन पर पुनरावलोकन करने की आवश्यकता को दृष्टि में रखकर ही यह शोध-कार्य किया गया है।

प्रस्तुत शोध को सुविधानुसार मुख्य आठ अध्यायों में विभक्त किया गया है। प्रथम अध्याय को शुक्ल-साहित्य के सर्वेक्षण के क्रम में पाँच उपभागों में विभक्त किया गया है—कविता, अनुवाद, निबंध, संपादन कार्य एवं भूमिका लेखन और कहानी। शुक्ल जी के

संपूर्ण लेखन के सर्वेक्षण के माध्यम से उसके सामंजस्य एवं तालमेल को दिखाने का प्रयत्न किया गया है और उनके चिंतन जगत् एवं विचारधारा के विकासक्रम को रेखांकित किया गया है। आचार्य शुक्ल का लेखन कार्य सन् 1910 ई० से लेकर लगभग 1940 ई० तक के विस्तृत कालखण्ड में प्रसारित है। शब्दकोष निर्माण, साहित्येतिहास लेखन, आलोचना कर्म के अतिरिक्त साहित्य की विभिन्न विधाओं तक उनका लेखन व्याप्त है। उन्होंने अंग्रेजी एवं बंगला से अनेक महत्त्वपूर्ण अनुवाद किये। कविता, निबंध के अतिरिक्त एक कहानी और बच्चों के लिए 'गोपालसभा' नाम से एक नाटक भी लिखा। उन्होंने 'नागरी प्रचारिणी पत्रिका' का संपादन कार्य भी किया।

शुक्ल जी की कविताओं में प्राकृतिक सौंदर्य की दृश्यावलि उपस्थित करने वाली कविताएं हैं, जिसमें प्रकृति के मधुर एवं कठोर दोनों रूपों के सौंदर्य की अमिथ्यवित हुई है। ये कविताएं रीतिकालीन भावबोध एवं रचनात्मक प्रक्रिया से अलग हटकर प्रकृति के प्रति नवीन साहचर्यगत प्रेम एवं उन्मुक्त प्राकृतिक सौंदर्य के विवात्मक वर्णन की कविताएं हैं। उनकी 'वसंत' नामक कविता प्रकृति के साथ-साथ अतीत के गौरव एवं देश के वर्तमान की हीनावस्था की भी कविता है। शुक्ल जी सच्चे देशप्रेमी थे, उनकी रचनाओं में देश-द्रोहियों को डांट-फटकार है, सूरत अधिवेशन में 'कांग्रेस' में फूट पड़ने पर चिंता है, क्योंकि इसी फूट के कारण देश की शोचनीय स्थिति हुई और वह गुलाम बना। उनकी कविताओं में उद्बोधन एवं निष्काम कर्म की प्रेरणा देने वाली कविताएं हैं। उनकी कुछ कविताएं व्यक्ति विशेष को आधार बनाकर लिखी गईं, जिनमें उनके योगदान की चर्चा है। शुक्ल जी की कविताओं में, ग्राम, ग्रामीण जीवन एवं वहां की सांस्कृतिक परंपराएं रची बसी हैं। इन कविताओं में काव्यात्मकता की कमी अनुभव की जा सकती है, किन्तु उनकी जीवन-जगत् संबंधी दृष्टि, ऐतिहासिक-बोध, स्वदेश-प्रेम, स्वभाषा-प्रेम एवं ज्ञान का प्रभामण्डल सर्वत्र विद्यमान है।

आचार्य शुक्ल ने अंग्रेजी से अनेक सैद्धांतिक निबंधों के हिन्दी में अनुवाद किये। वैज्ञानिक हैकल की पुस्तक 'रिडल्स आफ यूनिवर्स' का अनुवाद 'विश्वप्रपंच' नाम से किया। इन अनुवादों में शुक्ल जी की साहित्य एवं समीक्षा दृष्टि के निर्माण एवं विकास में आधार भूमि का कार्य किया। धर्म, समाज एवं मानवता को उसके विकास-क्रम में समझने का दिशा-बोध कराया। उनके सभी अनुवाद अक्षरशः अनुवाद की अपेक्षा भावानुवाद हैं। अनुवाद करते समय उन्होंने अपने परिवेश, परंपरा, साहित्य एवं संस्कृति को ध्यान में रखा है। विषय की स्पष्टता एवं बोधगम्यता के लिए भारतीय ग्रंथों से उदाहरण चुने हैं और हिंदी भाषा की प्रकृति का ध्यान रखा है। उन्होंने उन्नीसवीं शताब्दी के उन्हीं दार्शनिकों एवं मनोवैज्ञानिकों के लेखों को अनुवाद के लिए चुना है, जो तत्कालीन चिंतन को नई दिशा दे रहे थे। विज्ञान संबंधी अनुवादों में वैज्ञानिक दृष्टि एवं वैज्ञानिक शब्दावली के निर्माण की इच्छा स्पष्ट झलकती है। नये पारिभाषिक शब्दों के निर्माण द्वारा हिन्दी में वैज्ञानिक चिंतन का द्वार खुला।

आचार्य शुक्ल ने निबंध को गद्य की कसौटी मानकर साहित्य में व्यक्ति स्वातंत्र्य को महत्व दिया, किंतु यह व्यक्ति स्वातंत्र्य या वैयक्तिकता मात्र भाषा-शैली संबंधी न होकर 'वस्तु' की विविधता एवं उसके प्रति देखने समझने की विभिन्नता में होनी चाहिए। उनकी दृष्टि में हृदय और बुद्धि, भाव और विचार, दोनों का साहचर्य आवश्यक है। अपने पहले मौलिक निबंध 'कविता क्या है' ? को लगभग 21 वर्षों तक परिवर्तित, परिवर्धित एवं संशोधित करते रहे। यह निबंध उनके चिंतन की विकास यात्रा के विभिन्न सोपानों को समझने की दृष्टि से महत्वपूर्ण है। एक प्रकार से यह निबंध उनकी संपूर्ण चिन्ताधारा की काव्यशास्त्रीय अमूल्यनिधि है। उन्होंने कविता का संबंध प्रत्यक्ष जीवन-जगत् से सम्बन्ध किया और भाव-प्रसार का संबंध ज्ञान-प्रसार से जोड़ा। अपने विभिन्न सैद्धांतिक निबंधों में उन्होंने विस्तार से कविता के मूल्यांकन के मानदंडों का निर्धारण किया। उनके मनोविकार संबंधी लेखों का मूलधार पाश्चात्य मनोविज्ञान है, लेकिन शुक्ल जी ने व्यावहारिक जीवन में इसका विनियोग करते हुए साहित्यिक निबंध लिखे। उन्होंने विभिन्न मनोविकारों का विश्लेषण एवं विवेचन सामाजिक परिप्रेक्ष्य में किया है, जो महत्वपूर्ण है। अंग्रेजी भाषा में भी उनके कुछ लेख प्रकाशित हुए, जिनमें 'नान कोआपरेशन एण्ड नान मर्केंटाइल क्लासेज' एवं 'ह्वाट हैज इण्डिया टु डू' उनकी राजनीतिक चेतना के दस्तावेज हैं।

शुक्ल जी की अधिकांश व्यावहारिक समीक्षा भूमिका के रूप में लिखी गई। उन्होंने 'शब्द-सागर' का सम्पादन किया और उसकी भूमिका के रूप में 'हिन्दी साहित्य का विकास' लिखा, जो हिन्दी साहित्य का प्रथम सुव्यवस्थित इतिहास है और जिसमें उन्होंने साहित्येतिहास को 'एक पक्का एवं व्यवस्थित ढाँचा' प्रदान किया। शब्द-कोश के संपादन के क्रम में इतिहास, दर्शन, व्याकरण, साहित्य आदि विषयों पर लिखी गई विस्तृत टिप्पणियाँ निबंधों के रूप में ही दिखाई देती हैं। इस कार्य को करते समय उन्हें अपने अध्ययन को व्यापक बनाने का भी पूरा अवसर प्राप्त हुआ।

आचार्य शुक्ल की आलोचनादृष्टि के निर्माण एवं विकास में उनके परिवार का राम-भक्ति-मय वातावरण, मिर्जापुर की प्राकृतिक वनस्थली, तत्कालीन हिंदी-नव-जागरण भारतीय-नवजागरण एवं स्वाधीनता संघर्ष महत्वपूर्ण भूमिका निभाते हैं। 1857 ई० के स्वतंत्रता-संग्राम के पश्चात् विदेशी साम्राज्यवाद एवं भारतीय सामंतवाद का गठबंधन हुआ और यहां की गरीब जनता दोहरे शोषण का शिकार बनी। जैसे-जैसे स्वाधीनता संघर्ष तीव्र होता गया, वैसे-वैसे लोगों के एक जुट होकर विदेशी-शासन के विरुद्ध संघर्ष करने की आवश्यकता बढ़ती गई। गांधी जी असहयोग का मार्ग अपना रहे थे, जिसे शुक्ल जी ने 'सतही विद्रोह' कहा। उन्होंने 'भेद में अन्धे' को सर्वोपरि माना और कर्म-सौंदर्य के पुजारी बने एवं कर्म सौंदर्य को एक साहित्यिक प्रतिमान के रूप में विकसित किया। उन्होंने भाव की नई व्याख्या की, साधनावस्था या प्रयत्नावस्था के काव्य को श्रेष्ठ माना, मुक्तककाव्य की अपेक्षा प्रबंध-काव्य को महत्व दिया। उनके मन में आततायी के विरुद्ध राम के सक्रिय संघर्ष की अवधारणा थी। उन्होंने तिलक के सक्रिय प्रतिरोध के मार्ग को अपनाया। इस सक्रिय प्रतिरोध एवं देशप्रेम की भावना को विश्वपटल पर घटित होने वाली घटनाओं ने और भी दृढ़ीभूत किया। प्रथम एवं द्वितीय विश्वयुद्ध ने यूरोपीय

साम्राज्यवाद की नकाब खोल दी। रूस की क्रांति ने एक नया आत्म-विश्वास उत्पन्न किया।

भारतेन्दु-युग से ही साहित्य संबंधी अवधारणा एवं विषय का विस्तार हुआ। द्विवेदी जी भी हिंदी कविता को सामंती रुचि एवं आवश्यकता के घेरे से निकालकर, सामान्यजन और प्रकृति के मुक्तलोक में प्रतिष्ठित करना चाहते थे। उनके द्वारा उठाये गये इस कार्य को आचार्य शुक्ल ने चरमपरिणति पर पहुँचाया। उन्होंने पाश्चात्य एवं भारतीय साहित्य व सिद्धांतों के ज्ञान के आधार पर एक नया रास्ता बनाया, जो सामन्तवादी-उपनिवेशवादी एवं साम्राज्यवादी विचारों का विरोध करता हुआ, जनवादी विचारधारा का पोषक बना। उन्होंने 'छायावाद' का विरोध किया, किन्तु समकालीन रचनाशीलता के रूप में छायावादी साहित्यिकता का प्रचुर प्रभाव शुक्ल जी की आलोचना-दृष्टि एवं प्रतिमानों पर पड़ा है। उन्होंने साहित्य में लाक्षणिक मूर्तिमत्ता, विम्ब-विधान, प्रयोग-वैचित्र्य, भाषा की वक्रता आदि को काव्य-शैली के मानदण्ड के रूप में स्वीकार किया। यह आकस्मिक नहीं है कि उन्होंने साहित्यिकता एवं असाहित्यिकता के आधार पर हिन्दी-साहित्य का मूल्यांकन किया। उन्होंने अपने वस्तुवादी दृष्टिकोण एवं लोकमंगल, लोकरंजन और लोकरक्षा के प्रतिमानों के आधार पर अतीत के साहित्य का मूल्यांकन कर अतीत की जीवन्त परंपरा को निर्जीव एवं रूढ़ परंपरा से विलगाया और समकालीन रचनाशीलता के मूल्यांकन के क्रम में उन्होंने उठनेवाले नाना कलावादी झंझावातों का डटकर मुकाबला किया और भविष्य के लिए साहित्य का मार्ग-निर्देश किया। यह एक ऐसा मार्ग था, जो इसी जगत् से होता हुआ, जन-जीवन की आशाओं, आकांक्षाओं, संघर्ष पीड़ा तक पहुँचता था।

आचार्य शुक्ल के सुसंगत दृष्टिकोण का आधार ज्ञान का भौतिकवादी सिद्धान्त है। वह इन्द्रियबोध को ही ज्ञान एवं भाव का आधार मानते हैं। वह भाव के निषेध के स्थान पर परिष्कार के पक्ष में हैं, क्योंकि कर्म में प्रेरित करने वाली मूल प्रवृत्ति भावात्मिका है। उन्होंने भाव की तीन दशा का उल्लेख किया—भावदशा, स्यायीदशा और शीलदशा। उन्होंने कविता में भाव एवं विभाव के सामंजस्य पर बल देते हुए भी विभाव को प्रमुख माना। उन्होंने प्रकृति को उद्दीपन विभाव के स्थान पर स्वतंत्र आलंबन के रूप में स्वीकार किया और उसके कोमल एवं कठोर दोनों रूपों के सौंदर्य को स्वीकृति दी। उनका रसवाद प्राचीन संस्कृताचार्यों का रसवाद नहीं है, उन्होंने रसवाद को वैज्ञानिक भौतिक आधार प्रदान कर साहित्यालोचन के लिए एक पूर्ण और प्रगतिशील सिद्धांत के रूप में रखने की चेष्टा की। वह साहित्य में किसी भी प्रकार की रूढ़ि के विरोधी रहे हैं, अतः उन्होंने रसानुभूति की सीमा में कल्पित रूप-विधान के साथ स्मृत रूप-विधान और प्रत्यक्ष रूप-विधान को भी समेटा। रस की सीमा पारंपरिक रसों तक सीमित न होकर सामने फैले विश्व काव्य तक विस्तृत है। शुक्ल जी ने जीवनानुभूति एवं रसानुभूति की एकता को स्थापित किया और रसानुभूति की अनिवार्यतः आनंदमयी परिणति का खण्डन करते हुए, उसके लोकोत्तरत्व एवं ब्रह्मानंद-सहोदरत्व का खण्डन किया। व्यावहारिक घरातल पर रसानुभूति की विवे-

चना करते हुए उन्होंने उसकी तीन कोटियां मानी—उत्तम, मध्यम, एवं निम्न । 'साधारणीकरण' का संबंध आलम्बनत्व धर्म से सम्बद्ध किया और परंपरागत भाव एवं रस की निश्चित संख्या को स्वीकार नहीं किया । उन्होंने रस-संबंधी सभी अवयवों को विस्तृत-पटल पर प्रतिष्ठित किया और रस-दशा की कोई सीमा निर्धारित नहीं की, क्योंकि ज्ञान-प्रसार के साथ-साथ हृदय का भी विस्तार होता है और नवीन ज्ञात वस्तुओं एवं व्यापार के मार्मिक पक्ष का उद्घाटन कर सहृदय को सामान्य लोकभाव भूमि पर पहुँचाना काव्य का लक्ष्य है ।

शुक्ल जी ने साहित्य में साधन और साध्य के विभाजन को भारतीय काव्यशास्त्र की महत्वपूर्ण देन स्वीकार किया और लय, छन्द, अलंकार, नाद, कल्पना आदि को काव्य का साधन माना । काव्य का साध्य व्यक्ति को व्यक्तिगत संबंधों के संकुचित घेरे से ऊपर उठाकर लोक-सामान्य भावभूमि पर प्रतिष्ठित करना है और इस भावयोग को कर्मयोग एवं ज्ञानयोग के समकक्ष माना । उन्होंने काव्यभाषा, छंद, अलंकार, लय, नाद, शब्द-शक्ति आदि पर रस की दृष्टि से विचार किया और वहीं तक उनके प्रयोग को स्वीकार किया, जहां तक वे भावोद्बोधन में सहायक हों । संस्कृत काव्यशास्त्र में शब्द-शक्ति-विवेचन एक महत्वपूर्ण उपलब्धि है, जिसे शुक्ल जी ने स्वीकार किया और अर्थ-मीमांसा के लिए उनकी उपयोगिता को रेखांकित किया । इन शब्द-शक्तियों में उन्होंने अभिधा को ही प्रमुख माना ।

शुक्ल जी ने सौंदर्य की वस्तुवादी व्याख्या की । काव्य में वस्तुपक्ष को महत्त्व देते हुए, वस्तु एवं रूप के पूर्ण सामंजस्य को स्वीकार किया । उनका 'रूप' संबंधी विवेचन आलोच्य कृति के सौंदर्य को आच्छादित नहीं करता, बल्कि उसके विभिन्न स्तरों को खोलकर दिखाता है । भावाभिव्यंजनावादी समीक्षा या प्रभावाभिव्यंजक समीक्षा के स्थान पर अर्थ-मीमांसा पर बल देकर शुक्ल जी ने समीक्षा में वस्तुनिष्ठता की प्रतिष्ठा की । काव्य प्रतिमान के रूप में लोकमंगल को स्थापित करते हुए उन्होंने सक्रिय प्रतिरोध को स्वीकार किया और आत्रघर्म के सौंदर्य को महत्त्व दिया । 'करुणा' को काव्य का मूल भाव मानना भी इसी बात की पुष्टि करता है । उन्होंने काव्य में द्वन्द्व एवं संघर्ष को स्वीकार करते हुए प्रयत्न पक्ष या साधनावस्था के काव्य को महत्त्वपूर्ण माना और अनिवार्यतः आनन्दमयी परिणति का खण्डन किया । उनकी दृष्टि में प्रयत्न एवं संघर्ष महत्त्वपूर्ण हैं, क्योंकि विफलता में भी एक विशिष्ट प्रकार का सौंदर्य होता है, वह है कर्म-सौंदर्य । अपने वस्तुवादी प्रतिमानों के आधार पर काव्य में सामंती अभिरुचि एवं शास्त्रवाद का खंडन किया और कलावाद एवं व्यक्ति-वैचित्र्यवाद से लोहा लिया और अपने लक्ष्य पर अडिग रहे ।

आचार्य शुक्ल की चिन्तना के केन्द्र में विशिष्ट जन या वर्ग न होकर लोकसामान्य एवं लोकरुचि है । लोकमंगल की प्रेरणा से प्रेरित अपने सिद्धान्तों के निर्माण में भारतीय एवं पाश्चात्य आलोचना-दृष्टियों का उन्हें सामना करना पड़ा, ऐसी स्थिति में टकराव स्वाभाविक था । उन्होंने भारतीय व पाश्चात्य साहित्यशास्त्र के प्रगतिशील तत्त्वों को अपनाया

और प्रगतिगामी एवं जन-विरोधी तत्त्वों का विरोध किया। एडिसन द्वारा प्रतिपादित कल्पना को महत्त्वपूर्ण मानते हुए भी शुक्ल जी ने उसे काव्य का साधन माना। उन्होंने काव्य में विम्ब-विधान को काव्य-भाषा के प्रतिमान के रूप में प्रतिष्ठित करते हुए भी 'विम्बवाद' का विरोध किया। काव्य में प्रतीकों की उपयोगिता को स्वीकार करते हुए भी 'प्रतीकवाद' का विरोध किया। नाद-सौष्ठव को स्वीकार करते हुए भी 'संवेदनावाद' के प्रमुख रचनाकार ई० ई० कर्मिज का खण्डन किया। क्रोचे के अभिव्यञ्जनावाद के खण्डन में अन्त तक सक्रिय रहे। मनोविकारों के विश्लेषण में पाश्चात्य मनोविज्ञान से दिशानिर्देश लेकर भी उन्हें सामाजिक एवं व्यावहारिक धरातल पर परखा एवं विश्लेषित किया। अपने वस्तुवादी दृष्टिकोण के कारण काव्य में रहस्यवाद एवं आध्यात्मिकता का प्रतिरोध किया। हृदय और बुद्धि दोनों को स्वीकार करते हुए उन्होंने काव्य में आत्यन्तिक साहित्यिकता अथवा इतिवृत्तात्मकता एवं गद्यवत् स्थापन, दोनों का प्रतिरोध किया और साहित्य की साहित्यिकता की रक्षा के साथ-साथ साहित्य की सामाजिकता को प्रतिष्ठित किया।

कविता के प्रति वस्तुवादी दृष्टि एवं उसके द्वारा लोकमंगल का विस्तार—ये दो मुख्य आधार बिन्दु हैं, जिसके इर्द-गिर्द शुक्ल जी की काव्य-संबंधी समस्त मान्यतायें घूमती हैं। जहां कहीं इन बिन्दुओं से कविता का विचलन देखते हैं, उसकी आलोचना करते हैं। काव्य में इन दोनों की प्रतिष्ठा के लिए भारतीय काव्य-शास्त्र की पुनर्व्याख्या करते हैं, प्रतिष्ठित रीतिकाव्य को पदच्युत कर भक्तिकाव्य को प्रतिष्ठित करते हैं, पाश्चात्यकलावादी धारणाओं का खण्डन करते हुए, समसामयिक रचनाशीलता की कलावादी रचनाओं एवं प्रवृत्तियों पर कटु प्रहार करते हैं। ऐसा करने में कहीं-कहीं अतिवादिता के शिकार भी हुए हैं और भ्रामक निष्कर्ष भी दिये हैं, विशेषकर संत-साहित्य एवं छायावाद के मूल्यांकन में। इसी में उनकी आलोचना की शक्ति एवं सीमा दोनों हैं। 'जनता' और 'शिक्षित जनता', 'साहित्यिकता' और 'सामाजिकता' का द्वन्द्व एवं तनाव शुक्ल जी द्वारा किये गये साहित्य के मूल्यांकन में सर्वत्र परिलक्षित होता है।

आचार्य शुक्ल जीवन-जगत् की यथार्थता को स्वीकार करते हुए उसे अव्यक्त की अभिव्यक्ति मानते हैं। वस्तुतः जीवन-जगत् एवं साहित्य को देखने एवं विश्लेषित करने की उनकी दृष्टि वस्तुवादी है, किन्तु वैज्ञानिक या क्रांतिकारी नहीं। उनके सामाजिक, राजनीतिक चिंतन में अनेक असंगतियां हैं, जिनका निश्चित प्रभाव साहित्यिक मूल्यांकन पर भी पड़ा है। यह असंगतियां एवं सीमायें उनके समसामयिक चिंतन की भी सीमायें हैं। उनके चिंतन एवं मूल्यांकन की असंगतियों एवं अन्तर्विरोधों को रेखांकित करना आवश्यक है, किन्तु उनको ब्राह्मणवादी या एकांगी समाजशास्त्री कहना उचित न होगा। प्रत्येक रचनाकार के चिंतन एवं लेखन में अन्तर्विरोध एवं असंगतियां हो सकती हैं, किन्तु इनके बावजूद रचनाकार की मुख्य दिशा कौन सी है, उसे जानना एवं समझना आवश्यक है और महत्त्वपूर्ण भी। इन असंगतियों एवं सीमाओं के बावजूद उनका समस्त चिंतन एवं मूल्यांकन वस्तुवादी एवं लोकमंगल की प्रेरणा से प्रेरित है, जो अधिक महत्त्वपूर्ण है।

भूषण के काव्य का सामाजिक सन्दर्भ

रवि श्री बाला

निर्देशिका : प्रो० (श्रीमती) सावित्री चन्द्र (शोभा)

हिन्दी साहित्य के इतिहास में रीतिकाव्य का मूल्यांकन विभिन्न विद्वानों ने अपने-अपने दृष्टिकोण से करके रीतिकाल का नामकरण कुछ विशिष्ट प्रवृत्तियों के आधार पर किया है इस काल में "रीति" प्रवृत्ति का मुख्य रूप से प्रचलन और निर्वाह होने के कारण विभिन्न साहित्येतिहासकारों और आचार्यों ने इसे रीतिकाल नाम ही मुख्यरूप से दिया है। रीति प्रवृत्ति के बाहुल्य के कारण आचार्य रामचन्द्र शुक्ल ने उत्तर मध्ययुग को रीतिकाल की संज्ञा दी तथा पूर्व मध्यकाल को भक्तिकाल कहा। प्रवृत्तियों के आधार पर यदि रीतिकाल पर दृष्टिपात किया जाय तो कुछ प्रवृत्तियाँ ऐसी हैं जो समान रूप में परिलक्षित होती हैं। रीतिकाव्य परम्परा के साथ-साथ रीतिकाल में कुछ ऐसे भी कवि हुए जिन्होंने वीरगाथा परम्परा को भी अपनाया। भूषण वीरगाथा परम्परा में अपना अद्वितीय स्थान रखते हैं। हिन्दी साहित्य में वीररस की कविता का उत्थान जिन रूपों में प्राप्त होता है उनमें प्रथम उत्थान आदिकाल में वीर प्रशस्तियों का है जिनमें वीरगाथा, वीरगीत और मुक्तक वीर कविता आती हैं। द्वितीय उत्थान मध्यकाल में छत्रपति शिवाजी और महाराज छत्रसाल के उदय पर लिखी जाने वाली कविता में देखने को मिलता है। इसमें शुद्ध वीरकाव्य मिलता है। इसमें प्रथम उत्थान की भाँति वीरता और प्रीति का मिश्रण नहीं है। इस उत्थान के कवियों में भूषण और लाल कवि प्रमुख रहे।

भूषण ने आश्रयदाताओं को परखकर महाराज शिवाजी और छत्रसाल को अपना चरित नायक बनाया। भूषण के आश्रयदाता छत्रपति शिवाजी थे। इन्हीं की प्रशंसा में भूषण ने "शिवराज भूषण" की रचना की। भूषण के काव्य का केन्द्रबिन्दु शिवचरित्र है जिसे भूषण ने शिवाजी के निजी गुणों, विशेषणों, उनके बाहुबल, सैन्य प्रस्थान, शौर्यपूर्ण व्यक्तित्व युद्धनीति, शत्रुविनाशिनी शक्ति आदि के सहज और प्रभावशाली चित्रण द्वारा अंकित। उन्होंने शिवाजी को केवल युद्ध और धर्मवीर शासक के रूप में ही नहीं अपितु दानवीर, दयावीर के रूप में चित्रित करके उनकी शरणागतवत्सलता, उदारता और गुणग्रहकता पर भी प्रकाश डाला है। भूषण के शिवाजी निरभिमानी व्यक्तित्व के साथ-साथ वैभवाप्रिय, प्रजापालक सुयश और सद्गुणों का प्रकाश पुंज हैं जो जीवन पर्यन्त राष्ट्र के गौरव और देश की रक्षा के लिए संघर्ष करते हुए देश-प्रेम की बलवेदी पर न्योछावर हो गए। शिवाजी के चरित्र को अपने काव्य का आधार बनाकर भूषण ने रीतिकालीन परम्परा से हटकर

काव्य रचना की, जो उन्हें अपने समकालीन अन्य कवियों से पृथक् श्रेणी में लाकर खड़ा कर देता है।

हिन्दी में साहित्य के समाजशास्त्रीय अनुसंधान की परम्परा दिन-प्रतिदिन विकसित और सुस्थापित होती जा रही है। साहित्य के कला पक्ष को न अपनाकर आज उसका समाजशास्त्रीय दृष्टिकोण से विवेचन और मूल्यांकन किया जा रहा है। रीतिकाल के कवियों के काव्य का आज तब साहित्यिक दृष्टि से ही मूल्यांकन किया गया है और इस प्रकार इस काल-विशेष के काव्य को निकृष्ट काव्य माना गया। रीतिकालीन काव्य को इस प्रकार उपेक्षित किया जाता रहा। रीतिकालीन साहित्य की इस उपेक्षा की प्रतिक्रिया के परिणामस्वरूप रीतिकालीन साहित्य के पुनर्मूल्यांकन की दिशा में प्रयत्न किए गए हैं। समाजशास्त्रीय अध्ययन की लोकप्रियता वर्तमान में तीव्रता से फैलती जा रही है। साहित्य की समाजशास्त्रीय दृष्टि के आधार पर नवीन निष्कर्षों तक पहुँचा जा सकता है और साहित्य के क्षेत्र में नवीन मूल्य स्थापित किए जा सकते हैं। प्रस्तुत शोध प्रबंध में न तो एकमात्र रूप में ऐतिहासिक दृष्टिकोण ही अपनाया गया है और न ही पूर्णतः विवरणात्मक पद्धति। मेरी दृष्टि दोनों धाराओं का समन्वय करते हुए समाजशास्त्रीय रही है।

महान काव्य का सृजन शून्य में नहीं होता। काव्य का सृजन धरा पर होता है, उस समाज में होता है जहाँ वह रचनाकार रहता है। अतः उसके काव्य की घटनाएँ, उपमाएँ और प्रतीक इत्यादि उसके समाज से ही गृहीत होते हैं। प्रस्तुत पक्ष में या अप्रस्तुत पक्ष में, अनुभूति या अभिव्यक्ति के रूपा में कवि का वर्तमान उसके काव्य का अभिन्न अंग बन जाता है। यह वर्तमान कवि का वर्तमान न होकर उस समाज और युग का भी होता है जिसमें वह कवि अवतरित हुआ। अतः किसी भी कवि के काव्य का समुचित ज्ञान प्राप्त करने के लिए उसके वर्तमान को, उसके काव्य में निहित समाज और तत्कालीन देशकाल का अध्ययन अति आवश्यक है। प्रस्तुत शोध प्रबंध में मेरी दृष्टि यही विश्लेषणात्मक और वस्तुारक अध्ययन की प्रक्रिया है।

भूषण वीररस की कविता लिखते हुए भी अपने सामाजिक और राजनीतिक जन-जीवन और परिवेश की उपेक्षा न कर सके। उनका काव्य अपने युग की माँग था और अपने युग की माँग की पूर्ति करने में भूषण सफल हुए या नहीं, यह देखने का प्रयास मैंने प्रस्तुत शोध प्रबंध में किया है। रीतिकाल में अवतरित होकर भूषण ने रीति और वीरगाथा परम्परा का किस रूप में निर्वाह किया और क्या उनका काव्य कोरी भावाभि व्यंजना है? इन प्रश्नों का सही उत्तर भूषण के काव्य के समग्र विवेचन द्वारा ही दिया जा सकता है।

भूषण ने शिवाजी का चरित्र यथाक्रम नहीं लिखा, तथापि उनकी प्रकीर्ण रचनाओं में ऐसे सूक्ष्म संकेत हैं जिनका इतिहास से पूर्ण समन्वय है। परन्तु कुछ विद्वान इतिहासकारों ने भूषण की रचना में कथित इतिहास संबंधी उचितियों को अप्रामाणिक माना है।

रीतिकालीन कवियों के काव्य को दरबारी होने का आरोप भी लगाया गया है। उन पर यह आक्षेप लगाया गया है कि दरबार में रहने के कारण रीति काव्य जन-जीवन की आवाज को न सुन पाया। परन्तु यह आरोप निराधार है और हम यह बात स्वीकार करने को तैयार नहीं हैं कि भूषण दरबार में बैठकर अपने समाज की उपेक्षा कर रीति का आलाप लेते रहे। सामाजिक चेतना परिस्थिति सापेक्ष है। अतः अपने समाज और परिवेश की उपेक्षा करके काव्य की रचना नहीं की जा सकती।

भूषण को कुछ विद्वानों ने जातिगत भेदभाव रखने वाला कवि कहा है क्योंकि भूषण ने हिन्दूपति शिवाजी की प्रशंसा और मुगल सम्राट औरंगजेब की निंदा की। यदि निष्पक्ष और न्यायपूर्ण दृष्टि से भूषण के काव्य पर विचार किया जाय तो यह स्पष्ट हो जाता है कि भूषण के विचार मुसलमान धर्म के विरोध में नहीं हैं। भूषण ने केवल अत्याचार और अन्याय का विरोध किया। वह भी विशेष रूप से औरंगजेब और उसके सूबेदारों के अनाचारों और अतिचारों के विरोध में। यदि भूषण की दृष्टि जातिद्वेष से दूषित होती तो औरंगजेब ही क्यों, वह उसके पूर्व पुरुषों और वंशजों को भी खोटी-खरी कहते उन्होंने औरंगजेब की ही निंदा की, किन्तु उसके पूर्वजों की प्रशंसा करे बिना वह नहीं रहे हैं।

भूषण का व्यक्तित्व और कृतित्व राष्ट्रवाद की दृष्टि से विवाद का विषय रहा है। इसके विषय में विद्वानों और समीक्षकों में मतभेद हैं। सभी विद्वानों ने भूषण के राष्ट्रीय पक्ष का एक स्पष्ट चित्र खींचने का प्रयास तो किया है, परन्तु वे अपनी सीमाएँ बांधकर स्वयं बंध गए हैं। पंडित मंगीरथ प्रसाद दीक्षित भूषण के राष्ट्रीय पक्ष को मावावेशमयी भाषा में उभारकर लाए तो हैं पर उनकी उग्रता और अतिशयोक्ति अखरती है। मिश्र बंधु, पंडित विश्वनाथ प्रसाद मिश्र, पंडित राजनारायण शर्मा आदि ने भी अपने भूषण संबंधी ग्रंथों में राष्ट्रीयपक्ष को स्पर्श किया है, पर वे भी शास्त्रीय पद्धति की आलोचना में फँसकर सिद्धांतों के इर्द-गिर्द ही चक्कर काटते रह गए।

भूषण की कविता को कविता न मानकर विद्वानों ने उनके साथ अन्याय ही नहीं किया वरन् उनको हिन्दी साहित्य के इतिहास में वह स्थान नहीं मिल पाया जो उन्हें प्राप्त होना चाहिए था। अभी हाल ही में डा० भगवानदास तिवारी आदि विद्वानों के प्रयास उल्लेखनीय और महत्त्वपूर्ण हैं कि इन मूर्खन्य विद्वानों ने उनके काव्य को भारतीय जनता के समक्ष प्रस्तुत किया और एक विचारशील और शिक्षित व्यक्ति को भूषण के प्रति सोचने और समझने को प्रेरित और प्रोत्साहित किया। भूषण के जिस काव्य को केवल वीर रस प्रधान शिवाजी प्रशस्ति समझा गया, उसका एक और पक्ष उभरकर सामने आया और वह है भूषण का धर्मनिपेक्ष राष्ट्रवाद। भूषण के काव्य का समाजशास्त्रीय दृष्टि से मूल्यांकन अभी तक अपेक्षित रहा है। साहित्य को लोकहृदय का संबंध मानकर चलने वाले किसी भी अध्ययन के लिए यह आवश्यक है कि इस नवीन दृष्टि से भूषण के काव्य का मूल्यांकन कर साहित्येतिहास में उनका स्थान निर्धारित किया जाय। भूषण के काव्य का

सामाजिक सन्दर्भ हमें उन मूल्यों के बारे में जानकारी प्रदान कर सकता है जो किसी कवि के काव्य को उस काल-विशेष से परे स्थायित्व प्रदान करते हैं। मेरे प्रस्तुत शोध प्रबन्ध की यही मौलिकता है।

प्रस्तुत शोध प्रबन्ध विषय-प्रवेश और उपसंहारके अलावा नौ अध्यायों में विभाजित है। इन अध्यायों की संक्षिप्त योजना और परिचय इस प्रकार है।

विषय-प्रवेशमें भूषण के काव्य का संक्षिप्त परिचय और उन पर उपलब्ध सामग्री का आकलन किया गया है। साथ ही यह दर्शित किया गया है कि प्रस्तुत शोध-प्रबन्ध पर कार्य करने की आवश्यकता क्यों महसूस की गई। इसके अतिरिक्त प्रस्तुत प्रबन्ध की मौलिकता पर भी प्रकाश डाला गया है। ऐसा इसलिए किया गया है कि भूषण के काव्य के समुचित विवेचन से पूर्व उनके काव्य की स्पष्ट रूपरेखा मस्तिष्क-पटल पर आ जाय। भूषण के काव्य से सम्बन्धित शोध-कार्यों का सर्वेक्षण भी इसी में संलग्न है।

प्रथम अध्याय में भूषण के जीवन और कृतित्व का विस्तार पूर्वक विवेचन किया गया है। विभिन्न विद्वानों और समीक्षकों की कृतियों के आधार पर भूषण का काल-निर्धारण और रचनाओं की जानकारी प्राप्त करने की चेष्टा की गई है। किसी कवि के युग और जन-जीवन का समुचित ज्ञान प्राप्त करने के लिए उस कवि के जीवनवृत्त और कृतियों का परिचय परमावश्यक है। भूषण के जीवनवृत्त का परिचय अंतःसाक्ष्य और बहिःसाक्ष्य के आधार पर प्राप्त करने का प्रयास इस अध्याय में किया गया है। भूषण के जीवनवृत्त और रचनाओं को इसी अध्याय में सुनिश्चित कर शोध प्रबन्ध के लिए आधार भूमि तैयार की गई है।

द्वितीय अध्याय में आलोच्यकालीन राजनीतिक, सामाजिक और आर्थिक परिस्थितियों तथा ऐतिहासिक पृष्ठभूमि का विस्तार में समीक्षात्मक विवेचन किया गया है। कोई भी कवि और कलाकार अपने युग की परिस्थितियों से प्रभावित हुए बिना नहीं रह सकता। परिस्थितियाँ किसी व्यक्ति के व्यक्तित्व के निर्माण और विकास में महत्वपूर्ण भूमिका अदा करती हैं। तत्कालीन राजनीतिक संघर्ष उस काल के साहित्य और कला की पृष्ठभूमि में होते हैं तथा इनकी अमिट छाप प्रस्तुत रूप में या अप्रस्तुत रूप में आवश्यक ही पड़ती है। साहित्य-सृजन समाज में होता है। अतः साहित्य को समाज निरपेक्ष नहीं माना जा सकता। भूषण के युग की परिस्थितियाँ उनके काव्य का समुचित बोध कराने में बहुत सहायक हैं।

तृतीय अध्याय में रीतिकाल और तत्कालीन काव्य का उल्लेख किया गया है। इस अध्याय में रीतिकालीन काव्य की विभिन्न धाराओं का संक्षिप्त परिचय देते हुए रीतिकाल के नाम की आलोचनात्मक व्याख्या की गई है। भूषण रीतिकालीन कवि थे और जिस समय उन्होंने अपने काव्य का सृजन किया उस काल-विशेष में रीति परम्परा के काव्य का सृजन हो रहा था। कवि अपने आश्रयदाताओं के संरक्षण में ऐसी काव्य रचना कर रहे थे जो उनकी

भावनाओं को उद्बलित कर उन्हें परमानन्द-प्रदान कर सके। रीतिकाव्य के कवियों का एक उद्देश्य रीति साहित्य रचने का यह भी रहा कि वे अपने आश्रयदाता शासकों को अपने आचार्यत्व का लोहा मनवाना चाहते थे। इसके विरुद्ध भूषण ने प्रचलित काव्य-परम्परा से हटकर वीर काव्य की रचना की। इस अध्याय में रीतिकाव्य के सन्दर्भ में भूषण के वीरकाव्य को समझनेका प्रयास किया गया है।

चतुर्थ अध्याय में भूषण के काव्य में तत्कालीन समाज और सामाजिक मान्यताओं का खोजने का प्रयास किया गया है। मनुष्य सामाजिक प्राणी है और वह प्रत्येक रूप में प्रत्यक्षतः या अप्रत्यक्षतः अपने परिवेश और समाज से संबद्ध रहता है। उसके भाव और विचारों की उत्पत्ति समाज में होती है और वे युग-परिवेश से प्रभावित होते हैं। इस अध्याय में भूषण के काव्य के विवेचन द्वारा तत्कालीन सामाजिक संरचना का स्पष्ट चित्र अंकित करने का समीक्षात्मक प्रयास किया गया है ताकि भूषण के युग की सामाजिक संरचना का समुचित और सही ज्ञान प्राप्त हो सके।

पंचम अध्याय में नगर-निवेश और व्यापार-वाणिज्य का विवेचन है। इस अध्याय में आलोच्यकालीन नगर-निवेश और तत्कालीन व्यापार-वाणिज्य को समझने का प्रयास किया गया है। भूषण के युग का भारत नगरीय जीवन और ग्राम्य जीवन की किस रूप में भाँकी प्रस्तुत करता है, इस बात की विवेचना की गई है। किसी राष्ट्र की अर्थ-व्यवस्था उसके व्यापार और वाणिज्य पर बहुत कुछ रूप में निर्भर करती है। सुविकसित और समुन्नत व्यापार-वाणिज्य किसी राष्ट्र की प्रगति और विकास का चित्र स्पष्ट करता है। नगर-निवेश और व्यापार-वाणिज्य का परस्पर घनिष्ठ संबंध है। किसी राष्ट्र में नगरों की स्थिति से वहाँ के व्यापार और वाणिज्य का सही रूप में बोध होता है। जिस देश में जितने नगर होंगे वहाँ का व्यापार और वाणिज्य उतना ही समुन्नत होगा क्योंकि नगर ग्राम्य जीवन पर आधारित कृषि-व्यवस्था के विरुद्ध व्यापारिक केन्द्र होते हैं। इस विस्तृत परिप्रेक्ष्य में भूषण के काव्य की विवेचना यहाँ की गई है।

षष्ठ अध्याय में भूषण के युग के राजा और तत्कालीन राजनीति की आलोचनात्मक व्याख्या की गई है और इस विवेचन के आधार पर तत्कालीन देशकाल की घटनाओं का चित्र अंकित करने का प्रयास रहा है। भूषण ने रीति परम्परा से हट कर वीरगाथा परम्परा को ही क्यों अपनाया और इसके लिए छत्रपति मराठा सरदार शिवाजी का ही चरित्र गायन ही प्रमुखतया क्यों चुना ? इन प्रश्नों का सही उत्तर भूषण के काव्य के आधार पर इस अध्याय में देने का प्रयास रहा है। भूषण पर सम्प्रदायवादी होने और उनकी राष्ट्रीयता को संकुचित मानसिकता कहकर उनके काव्य की उपेक्षा की जाती रही है। मैंने इस अध्याय में उनके राजनीतिक विचारों को उनके काव्य के माध्यम से अपनी आलोचनात्मक और निष्पक्ष दृष्टि से स्पष्ट करने का प्रयास किया है और यह चेष्टा की है कि इन आरोपों में कितना सत्य है। मेरे शोध प्रबन्ध का यह प्रमुख अध्याय है।

सप्तम अध्याय में सामाजिक परिवेश में नारी के जीवन और उसके विविध रूपों में

भांकी प्रस्तुत की गई है। किसी राष्ट्र की सम्यता और संस्कृति के विकास में नारी का भी उतना ही योगदान और भूमिका होती है जितनी कि पुरुष वर्ग की। नारी और पुरुष सामाजिक जीवन के दो आधार स्तंभ हैं। उपेक्षित, और असहाय नारी की स्थिति में विकसित और समुन्नत समाज और संस्कृति की कल्पना नहीं की जा सकती। नारी की सुदृढ़ स्थिति द्वारा ही समाज में उच्च कोटि के जीवन-मूल्यों को स्थापित किया जा सकता है। इस अध्याय में नारी जीवन के विविध पक्षों का अनावरण कर तत्कालीन नारी की स्थिति को समझने का प्रयास किया गया है। रीतिकाल में नारी के प्रति कवियों ने शृंगारिक दृष्टिकोण अपनाया और उसे केवल कामवासना के प्रतीक के रूप में प्रदर्शित किया गया। इसी तथ्य को दृष्टिगत रखते हुए तत्कालीन नारी की सामाजिक स्थिति को सुनिश्चित कर समझने की चेष्टा रही है।

अष्टम अध्याय में संस्कृति के वाह्य स्वरूप की व्याख्या की गई है। किसी राष्ट्र की गौरवमय सम्यता और संस्कृति का ज्ञान उस राष्ट्र के जन-जीवन और उनके खान-पान, रहन-सहन, वस्त्राभूषण आदि से सहजरूप में लगाया जा सकता है। जिस देश के निवासियों की संस्कृति जितनी उत्कृष्ट और उच्च कोटि की विकसित होगी वह देश उतना ही प्रगतिशील और समुन्नत होगा। सुसंस्कृत जीवन ही राष्ट्र की प्रगति और विनाश का आधार होता है। इसी आधार पर भूषण के काव्य की व्याख्या कर संस्कृति के विविध पक्षों को प्रकट किया गया है।

नवम् अध्याय में आलोच्यकालीन धार्मिक जीवन एवं मान्यताओं को स्पष्ट विया गया है। मनुष्य के धार्मिक विश्वास और मान्यताएँ उसके जीवन को व्यापक रूप से प्रभावित करती हैं। भूषण ने अपने काव्य में तत्कालीन धार्मिक जीवन, विश्वास और मान्यताओं का विसरूप में और कहां तक उल्लेख किया है, यह स्पष्ट कर समझने की चेष्टा मैंने इस अध्याय में की है। भूषण का युग शिवाजी और औरंगजेब का शासनकाल है जिसमें शिवाजी और भूषण दो सम्प्रदाय-विशेषों के प्रतीक थे। भूषण के काल में हिन्दू-धर्म के साथ-साथ मुसलमान धर्म के विश्वास और मान्यताएं भी विद्यमान थीं। इस अध्याय में यह स्पष्ट किया गया है कि दोनों धर्मों के विश्वास किस प्रकार जन-जीवन को प्रभावित कर रहे थे। इस अध्याय के विवेचन से तत्कालीन धार्मिक स्थिति और विश्वासों का पता लगाने का सतत रूप में प्रयास किया गया है।

और सबसे अन्त में सम्पूर्ण शोध प्रबन्ध की उपसंहृति है जिसमें विशेष रूप से यह निदृष्टि किया गया है कि भूषण के काव्य में समन्वयवादी दृष्टि का किस रूप में और कहां तक निर्वहण हुआ है। भूषण के आश्रयदाता शिवाजी थे और उन्हीं के राज्य संरक्षण में भूषण ने ऐसे समय में काव्य सृजन किया जब मुगल सम्राट औरंगजेब का भारत के शासनतंत्र पर आधिपत्य था और वह अपने साम्राज्य विस्तार की नीति अपना रहा था। भूषण ने मुगल सम्राट की तुलना में शिवाजी के व्यक्तित्व और चरित्र को प्राथमिकता देते हुए गुणगान किया क्योंकि औरंगजेब धर्मान्धता और संकीर्ण मानसिकता और

विचारों का शिकार हो अनीति मार्ग अपनाए हुए था यह तो स्वाभाविक है कि भूपण ने अपने आश्रयदाता के सद्गुणों और व्यक्तित्व को विशेष महत्त्व दिया है और उन्हें हिन्दू पातसाही का रक्षक ही नहीं, अपितु देवतुल्य माना है। किन्तु इसमें तनिक भी संदेह नहीं कि औरंगजेब की नीतियां दोषपूर्ण थीं। उसकी दोषपूर्ण नीतियों ने मुगल साम्राज्य के विघटन और पतन का मार्ग प्रशस्त किया। इस प्रकार निष्कर्षतः भूपण के तत्कालीन समाज में योगदान का उल्लेख कर उनका साहित्येतिहास में स्थान सुनिश्चित करने का प्रयास किया गया है।

भूपण उत्तर मध्यकाल के वीर गाथा परम्परा के कवि हैं जिन्होंने रीतिकाव्य की अपेक्षा वीरकाव्य की रचना की। उनके काव्य को मराठा सरदार शिवाजी का गुणगान ही नहीं समझा जा सकता, अपितु अपनी विवेक दृष्टि को अपनाते हुए हमें यह देखने की आवश्यकता है कि छत्रपति शिवाजी किन नीतियों और आदर्शों के लिए जीवन-पर्यन्त संघर्ष कर अंत में अपने जीवन की बलि दे बैठे भूपण पर मुसलमान विरोधी होने के आरोप की परीक्षा के लिए हमें औरंगजेब की नीतियों को उसके महान मुगल पूर्वजों बाबर, हुमायूँ और अकबर की नीतियों के प्रकाश में समझना और ध्यान में रखना चाहिए।

राहुल सांकृत्यायन की इतिहास-दृष्टि

श्री चन्द्रभानु प्रसाद सिंह

निर्देशक : डा० मैनेजर पांडेय

राहुल सांकृत्यायन हिन्दी के एक ऐसे साहित्यकार-विचारक हैं, जिनका सम्पूर्ण लेखकीय और राजनीतिक-सामाजिक कर्म भारत की शोषित-पीड़ित जनता के बेहतर कल के निमित्त है। इसीलिए उन्होंने उसके सामाजिक-राजनीतिक संघर्षों में भाग लिया और लेखकीय कर्म के स्तर पर इन संघर्षों को रूपायित किया। इस क्रम में उन्होंने अपने समय और समाज को गहरे स्तरों पर समझने तथा भविष्य की दिशा निर्धारित करने की आवश्यकता महसूस की। फलतः वे इतिहास की ओर प्रत्यावर्तित हुए, क्योंकि अतीत को समझे बिना न तो वर्तमान को समझा जा सकता है और न ही भविष्य की दिशा निर्धारित की जा सकती है। राहुल ने विभिन्न रूपों में तथा विभिन्न स्तरों पर भारत तथा कमोवेश पूरे मध्य एशियाई देशों की व्यापक तथा बहु-आयामी इतिहास-यात्रा की है। कहानी हो या उपन्यास, जीवनी हो या संस्मरण, यात्रा-वृत्तांत हो या धर्म, दर्शन संबंधी लेखन—इन सभी संदर्भों में राहुल कमोवेश इतिहास-यात्रा करते हैं। इसके अतिरिक्त वे साहित्य-इतिहासकार के रूप में हिन्दी तथा पालि साहित्य के इतिहास और विशुद्ध इतिहासकार के रूप में भारत तथा अन्य मध्य एशियाई देशों के इतिहास पर भी विचार करते हैं। इतिहास-यात्रा के इन विविध रूपों में राहुल की मूल मंशा अपने समय और समाज को समझने तथा भविष्य की दिशा निर्धारित करने की है। ऐसी स्थिति में राहुल की मूल संवेदना को समझने के लिए उन ही इतिहास-दृष्टि का अनुशीलन आवश्यक है।

राहुल ने रचनात्मक स्तर पर मानवीय विकास-यात्रा को (भारत तथा आर्य जाति का मॉडल ग्रहण करते हुए) समग्र रूप में प्रस्तुत करने की कोशिश की है, जिसका महत्त्व मानविकी की सभी शाखाओं के लिए है। उन्होंने भारतीय इतिहास की समग्र जटिलता को समझने के लिए कमोवेश पूरे मध्य एशिया के इतिहास का आलोडन किया है। हिन्दी में यह एक अनोखा तथा महत्त्वपूर्ण प्रयास है। हिन्दी साहित्य-इतिहास के क्षेत्र में राहुल ने कई महत्त्वपूर्ण गुणियों को सुलझाया है, जिसकी उपादेयता अब भी बरकरार है। उन्होंने संस्कृति, धर्म तथा दर्शन के इतिहास-लेखन के संदर्भ में भी कई महत्त्वपूर्ण स्थापनाएँ की हैं। दुर्भाग्यवश अभी तक राहुल की व्यापक तथा बहुआयामी इतिहास-यात्रा की महत्ता को रेखांकित नहीं किया गया है। सारतः राहुल की मूल संवेदना को समझने तथा बहु-

आयामी इतिहास-यात्रा की महत्ता को रेखांकित करने के लिए उनकी इतिहास-दृष्टि का अनुशीलन किया गया है।

राहुल की इतिहास-दृष्टि ऐतिहासिक भौतिकवादी है। लेकिन वे अपने लेखकीय जीवन के आरम्भ से ही ऐतिहासिक भौतिकवादी दृष्टि को हृदयंगम कर नहीं चलते। वे अपना सामाजिक जीवन एक सन्यासी के रूप में शुरू करते हैं। वे क्रमशः आर्य समाज तथा बौद्ध धर्म में भी आस्था व्यक्त करते हैं। लेकिन एक वैज्ञानिक चेतना और समग्र विश्व-दृष्टि के लिए अनवरत आत्म-संघर्ष करने वाले राहुल को अंततः मार्क्सवादी दर्शन ही एक सही वैचारिक फलक प्रदान करता है। वे 1938-40 के आस-पास मार्क्सवाद में अपनी संपूर्ण आस्था व्यक्त करते हैं और इनका असर उनके लेखकीय कर्म पर भी पड़ा है। वे मार्क्सवाद से सैद्धांतिक औजार ग्रहण कर इतिहास की व्यापक तथा बहुआयामी यात्रा करते हैं। राहुल की इतिहास-दृष्टि के विवेचन के क्रम में इस वैचारिक विकास को दर्शाने की कोशिश की गयी है।

“राहुल सांकृत्यायन की इतिहास-दृष्टि” का अनुशीलन पाँच अध्यायों में किया गया है। पहले अध्याय “रचनात्मक इतिहास-दृष्टि” के अंतर्गत राहुल की ऐतिहासिक कथा-कृतियों का अनुशीलन किया गया है। राहुल ने “वोल्गा से गंगा” में बीस कहानियों के द्वारा मानवीय विकास-यात्रा (भारत और आर्यजाति का मॉडल ग्रहण करते हुए) को रूपायित किया है। ये कहानियाँ आदिम साम्यवादी समाज से लेकर भारतीय स्वाधीनता आन्दोलन तक के लगभग आठ हजार वर्षों तक की आर्थिक-राजनीतिक-सामाजिक विकास-यात्रा को रचनात्मक स्तर पर प्रस्तुत करती हैं। राहुल की अन्य ऐतिहासिक कथा-कृतियाँ “दिवोदास”, “सिंह सेनापति”, “जय यौधेय” तथा “राजस्थानी रनिवास” इस काल विस्तार के महत्वपूर्ण अध्यायों की किंचित विशद व्याख्या करती हैं। राहुल ने इस रचनात्मक इतिहास-यात्रा के द्वारा निरंतर विकासोन्मुख मानव-समाज को विचित्र किया है।

राहुल इतिहास को वर्ग-संघर्ष के रूप में प्रस्तुत करते हैं। इस संघर्ष में उन्होंने उच्च वर्ग (शासक वर्ग) तथा उसकी मूल्य व नैतिकता का विरोध किया है और साधारण जन-गण (शासित वर्ग) की फटेहाली तथा संघर्षशीलता के प्रति रचनात्मक सहानुभूति प्रकट की है। मानव-समाज की आदिम अवस्था साम्यवाद की है, जिसे मातृसत्ता कहा गया है। यह अवस्था शोषण-विहीन रही है। वर्ग-भेद और शोषण की शुरुआत पितृसत्ता से आरंभ होती है। राहुल ने पितृसत्ता युग, दास युग, सामंती युग तथा पूँजीवादी युग में शोषण के विभिन्न रूपों का वारीकी से चित्रण किया है और साथ ही इन विभिन्न युगों में शोषण के विभिन्न रूपों के खिलाफ बेहतरी के लिए संघर्षरत शक्तियों का भी चित्रण किया है। यह संघर्ष राजनीतिक सामाजिक-आर्थिक-वैचारिक सभी स्तरों पर चलता है। शोध-प्रबंध में विभिन्न उप-शीर्षकों के अंतर्गत इन संघर्षों और इन्हें रूपायित करने वाली राहुल की इतिहास-दृष्टि की विवेचना की गयी है। वस्तुतः राहुल अभिजनवाद विरोधी दृष्टि से इतिहास की

रचनात्मक यात्रा करते हैं। उन्होंने विभिन्न रूपों में तथा विभिन्न स्तरों पर व्यापक अभि-जनवाद विरोधी अभियान चलाया है। शोध-प्रबंध में इस अभिजनवाद विरोधी अभियान की तफसील से व्याख्या की गयी है।

राहुल की इतिहास-यात्रा का उद्देश्य अतीत की गाथा सुनाना नहीं है। वे अपने वर्तमान की समझ की कुंजी के रूप में अतीत का पर्यालोचन करते हैं। वर्तमान की इस समझ में भविष्य के संकेत सूत्र ढूँढ़ने की आकांक्षा भी अंतर्निहित है। राहुल की आस्था साम्यवादी भविष्य में है। यह आस्था कहीं तो बहुत ही फूहड़ रूप में और कहीं सार्थक रूप में प्रकट हुई है। राहुल की इस भविष्योन्मुखी इतिहास-दृष्टि के विविध पक्षों पर विस्तार से विचार करने की कोशिश की गयी है।

राहुल की शैली में भगवतशरण उपाध्याय और रांगेय राघव ने भी अपनी कृतियों क्रमशः "सवेरा-संघर्ष-गर्जन" तथा "महायात्रा : गाथा" में भारतीय इतिहास की सर्जनात्मक यात्रा की है। यद्यपि इन दोनों रचनाकारों ने राहुल की तरह लगभग आठ हजार वर्षों के काल-विस्तार को नहीं समेटा है, न ही इतिहास-यात्रा को अद्यतन बनाया है। फिर भी यथास्थलों पर उपर्युक्त दोनों कृतियों को दृष्टिपथ में रखा गया है। इनकी स्थापनाओं की युवित-युक्तता पर तुलनात्मक दृष्टि से विचार किया गया है। इससे राहुल की स्थापनाओं की प्रामाणिकता तथा ताकिकता की परख सहज हो गयी है। साथ ही, अपनी स्थापनाओं को विवेकपूर्ण बनाने के लिए साहित्य, इतिहास, धर्म दर्शन आदि विषयों से सम्बद्ध तथा उपयोगी पुस्तकों को भरसक दृष्टिपथ में रखने की कोशिश की गयी है।

राहुल की रचनात्मक इतिहास-दृष्टि की वाजिव-गैरवाजिव आलोचनाएं भी हुई हैं। इसमें मार्क्सवादी और मार्क्सवाद विरोधी या पुरानपंथी दोनों तरह के आलोचक-विचारक सम्मिलित हैं। एक ओर जहाँ डॉ० रांगेय राघव और डॉ० रामविलास शर्मा जैसे मार्क्सवादी साहित्यकार विचारक राहुल की स्थापनाओं को चुनौती देते हैं, वहीं दूसरी ओर डॉ० नगेन्द्र, डॉ० सत्यपाल चुघ जैसे पुरानपंथी आलोचक उनपर जोरदार प्रहार करते हैं। पहले अध्याय के अंत में "आलोचना और आलोचना" उपशीर्षक के अंतर्गत इस पूरे संदर्भ को दृष्टिपथ में रखकर राहुल की स्थापनाओं पर पुनर्विचार किया गया है। वस्तुतः राहुल की इतिहास-दृष्टि सही मायनों में परिवर्तनकांक्षी है। इसलिए मुलम्मे की तरह मार्क्सवाद का उपयोग करने वाले आलोचकों और पुरानपंथी आलोचकों दोनों को राहुल की स्थापनाएं नागवार लगती हैं।

राहुल की इतिहास-चिन्ता का एक अन्य रूप साहित्येतिहास है। इस संदर्भ में उन्होंने हिन्दी तथा पालि साहित्य के इतिहास पर विचार किया है। शोध-प्रबंध में विचार-विन्दु के केन्द्र में हिन्दी साहित्येतिहास यात्रा को रखा गया है। राहुल ने विधिवत् रूप से हिन्दी साहित्य के इतिहास पर विचार नहीं किया है। उन्होंने साहित्येतिहास के कच्चे माल की व्यापक खोज-बीन की है, जिसका प्रतिफलन "हिन्दी काव्यधारा", "दक्खिनी

हिन्दी काव्यधारा" और "दोहा-कोश" के रूप में हुआ है। राहुल ने साहित्येतिहास से सम्बन्धित सामग्री "राहुल निबंधावली," साहित्य निबंधावली" "पुरातत्व निबंधावली," "हिन्दी साहित्य का बृहत् इतिहास (षोडश भाग)" आदि में भी प्रस्तुत किया है। राहुल का सर्वाधिक महत्वपूर्ण काम सिद्धों और जैनों की कविताओं की खोज और उनका सम्यक् मूल्यांकन है। उनका हिन्दी साहित्येतिहास लेखन को यह सबसे बड़ा अवदान है। कुछ लोगों को राहुल के छिट-फुट साहित्येतिहास सम्बन्धी लेखन को देखकर उनकी साहित्येतिहास दृष्टि की चर्चा अनावश्यक लग सकती है। लेकिन इतना तय है कि राहुल ने साहित्येतिहास के क्षेत्र में जो भी लेखन किया है वह उन साहित्येतिहासकारों के ग्रंथों से ज्यादा महत्वपूर्ण और सार्थक है, जो उपलब्ध तथ्यों और तिथियों में ही कुछ घटा-बढ़ा कर इतिहासकार होने का दावा करते हैं।

इस शोध-प्रबंध के दूसरे अध्याय "साहित्य का इतिहास लेखन" में हिन्दी साहित्येतिहास से सम्बन्धित राहुल की मान्यताओं पर विचार किया गया है। राहुल साहित्य को बेहतर कल के निमित्त परिवर्तनकारी सामाजिक कर्म मानते हैं। साथ ही, वे साहित्य को पूरे सांस्कृतिक व्यवहार का अंग मानते हैं। उन्होंने साहित्य को साधारण जन गण की अपेक्षा में देखने-परखने और रचने की सिफारिश की है। राहुल साहित्य की इसी अवधारणा को दृष्टिपथ में रखकर साहित्येतिहास-यात्रा करते हैं। वे साहित्य के इतिहास के संदर्भ में समाज के इतिहास की जानकारी आवश्यक समझते हैं। लेकिन इसका यह अर्थ नहीं कि वे विधेय वादियों की स्थूल समाजशास्त्रीय शैली की वकालत करते हैं। वे हर समय साहित्य की सापेक्ष स्वायत्तता को दृष्टिपथ में रखते हैं। उसे समाज में निःशेष नहीं कर देते।

साहित्य के इतिहास में परम्परा और प्रगति, निरंतरता और अंतराल पर ध्यान देना जरूरी है। राहुल ने अपनी साहित्येतिहास-यात्रा में इन पर सम्यक् दृष्टिपात किया है। वे परम्परा को अखंड और अविभाज्य नहीं मानते हैं। उन्होंने साधारण जन-गण की साहित्यिक परम्परा और उच्च वर्ग की साहित्यिक परम्परा का फर्क किया है। इस संदर्भ में उन्होंने साधारण जन-गण की साहित्यिक परम्परा का समर्थन और उच्च वर्ग की साहित्यिक परम्परा का विरोध किया है। उन्होंने उन रचना-दृष्टियों की भी आलोचना की है, जिससे साधारण जन-गण के शोषण-उत्पीड़न का समर्थन मिलता है या उसके दीर्घकाल तक बरकरार रहने का मार्ग प्रशस्त होता है। इसी आधार पर राहुल ने सिद्धों और निर्गुणियों संतों के रहस्यवाद की आलोचना की है। रीतिकविता की दरबारी मनोवृत्ति की बरीयता को उधारा है। दूसरी ओर भक्त कवियों की लोकधर्मी चेतना व मानवतावादी विश्वदृष्टि की सराहना की है। भारतेंदु युग छायावाद और प्रगतिवाद के शोषण विरोधी तेवर का गद्गद होकर मूल्यांकन किया है। वस्तुतः राहुल का अभिजनवाद विरोधी अभियान साहित्येतिहास के संदर्भ में भी दृष्टिगत होता है।

राहुल ने साहित्येतिहास-यात्रा के संदर्भ में हिन्दी के जातीय स्वरूप को ध्यान में रखा है। उन्होंने हिन्दी साहित्येतिहास को हिन्दी जाति के इतिहास के रूप में देखने-परखने

की कोशिश की है। शोध-प्रबंध में राहुल की इस अवधारणा पर सम्यक् दृष्टिपात किया गया है। उन्होंने हिन्दी साहित्य के जातीय स्वरूप को दृष्टिपथ में रखकर ही उसके अंतर्गत हिन्दी प्रदेश की विभिन्न लोकभाषाओं के साहित्य को सम्मिलित किया है। साथ ही, फारसी लिपि और खड़ी बोली में लिखे जाने वाले साहित्य यानि उर्दू साहित्य को भी हिन्दी साहित्य का एक अविभाज्य अंग माना है।

हिन्दी साहित्येतिहास में काल-विभाजन और नामकरण की समस्या अभी तक बरकरार है। राहुल ने इस संदर्भ में सार्थक विचार प्रस्तुत किए हैं, जिसकी यथेष्ट चर्चा शोध-प्रबंध के इसी दूसरे अध्याय में की गई है। उन्होंने हिन्दी साहित्येतिहास में कालपरक नामकरण की विभिन्न समस्याओं को दृष्टिपथ में रखकर प्रवृत्तिपरक नामकरण की वकालत की है और एक हद तक सार्थक नामकरण किया भी है। हिन्दी साहित्येतिहास के कालपरक नामकरण की संगति सामाजिक इतिहास के कालपरक बोध से नहीं बैठती है। हिन्दी साहित्य का आदिकाल और मध्यकाल सामाजिक इतिहास की दृष्टि से क्रमशः उत्तरमध्यकाल और आधुनिक काल हैं। अगर हिन्दी साहित्येतिहास का कालपरक नामकरण किया जाय, तो फिर उसकी संगति सामाजिक इतिहास के कालपरक बोध के साथ बैठाना मुश्किल होगा। पर इसका यह अर्थ नहीं कि हिन्दी साहित्येतिहास में कालपरक बोध रखा ही नहीं जाय, या कि धारावाहिक इतिहास लिखा जाय। वस्तुतः कालपरक बोध को दृष्टिपथ में रखते हुए नामकरण प्रवृत्तिपरक होना चाहिए।

साहित्येतिहास लेखन की सार्थकता वर्तमान रचनाशीलता को गति देने में होती है, न कि वर्तमान रचनाशीलता के ऊपर परम्परा को प्रतिष्ठित करने में। इस दृष्टिकोण से भी राहुल की साहित्येतिहास-दृष्टि पर विचार किया गया है। राहुल ने अपनी साहित्येतिहास-यात्रा के द्वारा वर्तमान रचनाशीलता को गति प्रदान की है। उन्होंने अपने सामयिक साहित्यिक सांस्कृतिक आंदोलन प्रगतिशील आंदोलन से प्रेरित-प्रभावित होकर साहित्य-मूल्यांकन की दृष्टि निर्मित की है। इस दृष्टि से उन्होंने अतीत की सार्थक रचनाओं का मूल्यांकन किया है और वर्तमान रचनाशीलता के लिए उसकी प्रासंगिकता को रेखांकित किया है। वस्तुतः यह अतीत और वर्तमान को जोड़ने का अदभुत प्रयास है।

हिन्दी साहित्येतिहास लेखन की परम्परा में आचार्य रामचन्द्र शुक्ल, आचार्य हजारी प्रसाद द्विवेदी और डॉ० रामविलास शर्मा के नाम उल्लेखनीय हैं। इन साहित्य-विचारकों ने एक सार्थक विश्व-दृष्टि के तहत साहित्य के इतिहास की यात्रा की है। राहुल की इतिहास-दृष्टि के विवेचन-मूल्यांकन के संदर्भ में इन साहित्येतिहासकारों के ग्रंथों को दृष्टिपथ में रखा गया है। साथ ही, साहित्येतिहासदर्शन और इतिहासदर्शन के प्रणेताओं की स्थापनाओं को भी पाथेय के रूप में स्वीकार किया गया है।

साहित्य के इतिहास के केन्द्र में साहित्यिक कृतियाँ होती हैं और साहित्यिक कृतियाँ भाषा में रची जाती हैं। साहित्येतिहास में साहित्यिक कृतियों की भाषा का विश्लेषण

अपेक्षित है। साहित्यिक कृतियों की भाषा का सम्बन्ध समाज से होता है यानि उसका एक सामाजिक पक्ष होता है। दूसरी ओर, साहित्यिक कृतियों की भाषा का रचनाकार की सृजनशीलता से जुड़ा एक निजी पक्ष भी होता है। साहित्यिक कृतियों के विश्लेषण-मूल्यांकन के संदर्भ में उसकी भाषा के इन दोनों पक्षों पर विचार किया जाता है। इससे यदि एक ओर कृति का अपने युग-वास्तव से सम्बन्ध और उस युग-वास्तव का स्वरूप उद्घाटित होता है, तो दूसरी रचनाकार की सृजनशीलता भी उद्घाटित होती है। वस्तुतः साहित्येतिहासकार साहित्यिक कृतियों की भाषा का विश्लेषण करते हुए एक तरह से उस भाषा विशेष के इतिहास और प्रकारान्तर से उस भाषा-भाषी समाज के इतिहास का पर्यालोचन कर जाता है। बहरहाल हिन्दी साहित्येतिहास लेखन के संदर्भ में एक दूसरे दृष्टिकोण से भी भाषागत विवेचन जरूरी है। हिन्दी साहित्य के इतिहास में अपभ्रंश, मैथिली, अवधी, ब्रज, राजस्थानी और खड़ी बोली—इन पांच भाषाओं में लिखे गए साहित्य को शामिल किया जाता रहा है। दूसरी ओर हिन्दी जिस अर्थ में रूढ़ हो चुकी है, वह खड़ी बोली और नागरी लिपि में लिखी जा रही भाषा है। ऐसी स्थिति में क्या उपर्युक्त श्रेणियों में लिखे गए या लिखे जा रहे साहित्य को हिन्दी साहित्य के इतिहास से खारिज कर दिया जाय? डॉ० शिवदान सिंह चौहान ने इस संदर्भ में विशेष माथा-पच्ची न करके नागरी लिपि और खड़ी बोली में लिखे गये साहित्य को ही हिन्दी साहित्य के अंतर्गत परिगणित किया है। लेकिन वे यह भूल गए कि अपने इतिहास को छोटा करना बुद्धिमानी का काम नहीं होता है। बहरहाल इस समस्या का सम्यक् समाधान तभी हो सकता है, जब हिन्दी भाषा और हिन्दी प्रदेश की बोलियों के इतिहास को हिन्दी प्रदेश की सामाजिक-राजनीतिक-आर्थिक विकास-यात्रा के साथ जोड़कर देखा जाय।

राहुल सांकृत्यायन की इस संदर्भ में व्यक्त धारणाओं पर शोध-प्रबंध के तीसरे अध्याय “भाषा का इतिहास-लेखन” में विचार किया गया है। राहुल साहित्यिक कृतियों की भाषा का सम्बन्ध समाज से मानते हैं। वे साहित्यिक कृतियों की भाषा के परिवर्तन और विकास की व्याख्या सामाजिक आर्थिक संदर्भ में करते हैं साथ ही इस संदर्भ में रचनाकार की निजी सृजनशीलता को भी रेखांकित करते हैं। उन्होंने रूपवादियों की तरह भाषागत विश्लेषण को साहित्यिक कृतियों की भाषा तक सीमित नहीं रखा है।

राहुल हिन्दी साहित्य की शुरुआत अपभ्रंश साहित्य से मानते हैं। उन्होंने अपभ्रंश तथा अवधी, खड़ी बोली की व्याकरणिक तथा साहित्यिक प्रवृत्तियों की समानताओं के आधार पर ऐसा निष्कर्ष दिया है। उनकी दृष्टि में सिद्धों की विचारधारा का विकास निर्गुणियां संतों की कविताओं में होता है। दूसरी ओर, स्वयंभू के “पउम चरित” का सम्यक् प्रभाव तुलसीदास के “रामचरित मानस” पर पड़ा है। आचार्य रामचन्द्र शुक्ल अपने “हिन्दी साहित्य का इतिहास” में अपभ्रंश साहित्य के दाय को स्वीकार करते हुए भी वास्तविक हिन्दी साहित्य की शुरुआत “देशभाषा काव्य” से मानते हैं। डॉ० राम-विलास शर्मा ने भी अपभ्रंश और हिन्दी के सम्बन्ध से इनकार किया है। वे संस्कृत-प्राकृत-अपभ्रंश-देशभाषा की विकास शृंखला को नहीं मानते हैं। राहुल की स्थापनाओं पर इन

दोनों आलोचकों—इतिहासकारों की मान्यताओं के आलोक में विचार किया गया है। राहुल अपभ्रंश और हिन्दी के सम्बन्ध को लेकर कई असंगतियों के शिकार हो गए हैं, जिसकी विस्तृत चर्चा की गई है।

राहुल ने हिन्दी साहित्य के जातीय स्वरूप को ध्यान में रखकर उसके अंतर्गत उर्दू साहित्य और मैथिली, भोजपुरी, अवधी, ब्रज, राजस्थानी आदि लोकभाषाओं के साहित्य को भी समेटा है। लेकिन दूसरी ओर, वे इन लोकभाषाओं को स्वतंत्र जातीय भाषाएं मानते हैं। इन भाषाओं के आधार पर प्रांतों के पुनर्गठन की वकालत करते हैं और इन भाषाओं को अपने-अपने जनपदों में शिक्षा व प्रशासन की भाषा बनाने पर जोर देते हैं। वस्तुतः राहुल इन लोक भाषाओं की वकालत करते हुए कई असंगतियों और भ्रांतियों के शिकार हो गये हैं। वे हिन्दी भाषा के जातीय रूप को न समझ पाने के कारण इन लोक भाषाओं को स्वतंत्र जातीय भाषाएं मानने लगते हैं। इस प्रसंग की चर्चा शोध-प्रबंध के इसी तीसरे अध्याय में की गई है।

शोध-प्रबंध के चौथे अध्याय “राहुल की इतिहास-चिन्ता के अन्य रूप” में राहुल-रचित जीवनियों, संस्मरणों और यात्रा-वृत्तांतों के माध्यम से व्यक्त भारत, रूस, चीन, जापान, तिब्बत, श्रीलंका, ईरान आदि देशों के इतिहास की चर्चा की गई है। राहुल ने इन देशों की स्वतंत्र रूप से इतिहास-यात्रा करते हुए एकाधिक महत्वपूर्ण इतिहास-ग्रंथों का भी प्रणयन किया है। उन्होंने दो खंडों में “मध्य एशिया का इतिहास” लिखा है, जो समग्र रूप में मध्य एशियाई देशों की इतिहास-यात्रा का अनोखा प्रयास है। वस्तुतः मध्य एशियाई देशों की विभिन्न रूपों में इतिहास-यात्रा करते हुए भारतीय इतिहास की समग्र जटिलता को समझने की कोशिश की गई है। राहुल ने रूस और चीन जैसे कम्युनिस्ट मुक्तकों की क्रांति-पूर्व और क्रांति-पश्चात् की इतिहास-यात्रा भारत की संघर्षशील जनता और उसके हामियों के लिए पाथेय के रूप में की है।

राहुल ने हिन्दू, बौद्ध तथा इस्लाम धर्म, दर्शन व संस्कृति की भी इतिहास-यात्रा की है। उन्होंने अपनी पुस्तक “दर्शन-दिग्दर्शन” में विश्व की भौतिकवादी और अध्यात्म-वादी दार्शनिक धाराओं को एकत्र रूप में प्रस्तुत किया है। शोध-प्रबंध के इसी चौथे अध्याय में धर्म, दर्शन व संस्कृति सम्बन्धी राहुल की इतिहास-दृष्टि की समीक्षा की गई है।

राहुल अपने समसामयिक राजनीतिक-सांस्कृतिक आन्दोलनों से प्रेरित-प्रभावित होकर इतिहास-यात्रा करते हैं। उनकी इतिहास-दृष्टि पर भारतीय स्वाधीनता आन्दोलन, प्रगतिशील आंदोलन और विश्व कम्युनिस्ट आंदोलन का गहरा असर पड़ा है। शोध-प्रबंध में “राहुल की इतिहास दृष्टि : राजनीतिक-सांस्कृतिक आंदोलनों के संदर्भ में” शीर्षक पाँचवें अध्याय में राहुल की इतिहास-यात्रा पर पड़े उपर्युक्त आंदोलनों के प्रभावों को रेखांकित किया गया है। राहुल ने अपनी इतिहास-यात्रा साम्राज्यवादी इतिहास-दृष्टि

से संघर्ष करते हुए सम्पन्न की है। साथ ही, उन्होंने विभिन्न रूपों में तथा विभिन्न स्तरों पर साम्राज्यवादी प्रभुत्व को चुनौती दी है। दूसरी ओर, उन्होंने अपनी इतिहास-यात्रा में सामंतवाद विरोधी व्यापक अभियान चलाया है। वस्तुतः इस साम्राज्यवाद-सामंतवाद विरोध की सहधर्मिता भारतीय स्वाधीनता आंदोलन से है। राहुल ने साहित्येतिहास-यात्रा के संदर्भ में सिद्धों और निगुणियों संतों की सामंतवाद विरोधी और मानवतावादी विश्व दृष्टि को रेखांकित करते हुए उनके महत्वपूर्ण योगदान को हिन्दी साहित्य के इतिहास में प्रतिष्ठित किया। रीतिकालीन कविता की दरबारी मनोवृत्ति पर आक्रमण किया और भारतेन्दु युग, छायावाद तथा प्रगतिवाद की अभिजनवाद विरोधी व जनोन्मुखी चेतना को श्रेयस्कर माना। राहुल के इस इतिहास-विवेक की सहधर्मिता प्रगतिशील आंदोलन से है। उनके इस मूल्यांकन पर प्रगतिशील आन्दोलन से विकसित साहित्य-दृष्टि का गहरा असर है। राहुल के इतिहास-विवेक पर विश्व कम्युनिस्ट आंदोलन का भी गहरा असर रहा है। उन्होंने कम्युनिस्ट मुक्तों की विभिन्न रूपों में इतिहास-यात्रा की। साथ ही, इस आंदोलन से जीवनी शक्ति ग्रहण कर भारतीय इतिहास में संघर्षरत सामान्य मनुष्य की अदम्य जिजीविषा को रेखांकित किया और एक बेहतर कल (साम्यवाद) की ओर हल्का संकेत दिया।

सारतः राहुल की इतिहास-दृष्टि पर अपने समय और समाज का गहरा असर पड़ा है। लेकिन इसका यह अर्थ नहीं समझना चाहिए कि वे सापेक्षतावाद से ग्रस्त हैं। यद्यपि कुछ लोगों की दृष्टि में राहुल वर्तमान से अभिभूत होकर इतिहास-यात्रा करते हैं। बहर-हाल इस तरह के आरोपों में कोई खास जान नहीं है। वस्तुतः राहुल इतिहास-यात्रा में अतीत और वर्तमान के द्वन्द्वात्मक सम्बन्ध को हर समय दृष्टिपथ में रखते हैं। इस प्रसंग की विस्तृत चर्चा शोध-प्रबंध के अंत में की गई है।

राहुल की इतिहास-यात्रा व्यापक तथा बहु-आयामी है। वह विभिन्न रूपों में तथा विभिन्न संदर्भों में सम्पन्न की गई है और उसका विवेचन भी विभिन्न अध्यायों और उप-शीर्षकों के अंतर्गत किया गया है, लेकिन इसका यह अर्थ नहीं कि राहुल की इतिहास-यात्रा मानुषमती का पिटारा है। वस्तुतः राहुल की इस बहुआयामी इतिहास-यात्रा में एक वैचारिक संगति है। उनके पास एक संश्लिष्ट इतिहास-दृष्टि है, जो विभिन्न रूपों में तथा विभिन्न स्तरों पर व्यक्त हुई है। इस प्रसंग की चर्चा शोध-प्रबंध की भूमिका में प्रस्थान बिन्दु के रूप में कर दी गई है।

राहुल की इतिहास-दृष्टि को समग्रता में समझने और विवेचन पद्धति को तार्किक व प्रामाणिक बनाने के लिए उनके समानधर्मा और विरोधी दोनों तरह के रचनाकारों इतिहासकारों की कृतियों को हर समय दृष्टिपथ में रखा गया है। अद्वैतवादी शैली से हर समय बचने की कोशिश की गई है। राहुल की मान्यताओं को वेद-वाक्य नहीं माना गया है। उसके औचित्य-अनौचित्य पर उनके समानधर्मा तथा विरोधी रचनाकारों-विचारकों की मान्यताओं के आलोक में विचार किया गया है। राहुल की इतिहास-दृष्टि

और उससे जुड़ी मान्यताओं की वर्तमान प्रासंगिकता को हर समय ध्यान में रखा गया है। आज के भारतीय समाज और हिन्दी भाषा-साहित्य की आवश्यकताओं के अनुरूप उसके औचित्य-अनौचित्य पर विचार किया गया है।

राहुल एक ऐसे साहित्यकार-विचारक हैं, जिनमें शब्द और कर्म की अद्भुत एकता दृष्टिगत होती है। उन्होंने साधारण जनता के लिए लेखन ही नहीं किया, बल्कि सामाजिक-राजनीतिक संघर्ष भी किया। उन्होंने सिर्फ इतिहास-लेखन ही नहीं किया, बल्कि इतिहास-लेखन और जनवादी साहित्य-चिन्तन को प्रभावित भी किया। यह राहुल के व्यक्तित्व और कृतित्व की महत्ता का प्रमाण है। शोध-प्रबंध में राहुल की इस महत्ता को उद्घाटित करने की कोशिश की गई है। भारत के प्रगतिशील साहित्यकारों-विचारकों को उनकी रचनाएं अकूत पाथेय प्रदान करती रही हैं। आज के प्रगतिशील साहित्यकार-विचारक भी राहुल के लेखकीय और राजनीतिक-सामाजिक संघर्षों से सीखते हुए नए कर्तव्यों का सम्यक् निर्धारण और वस्तुगत रूप से इतिहास-निर्माण की प्रक्रिया में सहयोग कर सकते हैं।

आचार्य हजारी प्रसाद द्विवेदी के उपन्यासों में आधुनिक चेतना

मंजु राठीर

निर्देशक : डॉ० बी० एम० चिन्तामणि

प्रास्ताविक एवं शोध-निष्कर्ष :

मूलतः आचार्य हजारी प्रसाद द्विवेदी एक ऐतिहासिक उपन्यासकार के रूप में जाने जाते हैं। परन्तु उनके ऐतिहासिक उपन्यास न तो इतिहास की सपाट घटनाओं का पुनर्वर्णन करते हैं : न ही घटनाओं या किसी वैज्ञानिक आग्रह का आरोप करते हैं, बल्कि उनकी औपन्यासिक सृष्टियाँ इतिहास और आधुनिकता के द्वन्द्व से पैदा हुई हैं और इतिहास और आधुनिकता का यह तनाव लगभग सर्वत्र ही दिखाई पड़ता है। इस बात की पुष्टि न केवल आलोचकों ने बल्कि स्वयं आचार्य द्विवेदी ने भी अपनी औपन्यासिक कृतियों में की है। वैसे मूलतः आचार्य द्विवेदी के चारों ही उपन्यास प्रेम-प्रधान ही हैं। “बाणभट्ट की आत्म-कथा” में मूलतः नैतिक मूल्यों और प्रेम के आभ्यन्तर आवेग का द्वन्द्व है, “चारुचन्द्रलेख” में राज्य की नियति है, “पुनर्नवा” में मध्ययुगीन इतिहास की नवीन व्याख्या करने की चेष्टा की गई है और “अनामदास का पोथा” पूरे मानव समाज की नियति की खोज है। वस्तुतः आचार्य द्विवेदी अपनी समस्त औपन्यासिक कृतियों में ऐतिहासिक या प्रागैतिहासिक कथानक को लेकर चलते हैं; परन्तु उनका सम्बन्ध उस काल से अवश्य है, जिसके बीच वे लिखे गए हैं। इसीलिए हिन्दी के एक आलोचक ने ‘प्राचीनों से गप लगाता हुआ आधुनिक’ कहकर आचार्य द्विवेदी के व्यक्तित्व को प्रभावित करने की चेष्टा की है। वस्तुतः यह आधुनिकता न केवल उनके औपन्यासिक भावबोध के धरातल पर, अपितु उनकी औपन्यासिक वैचारिकता और यहाँ तक कि उनके औपन्यासिक शिल्प में भी सहज देखी जा सकती है। और यह आधुनिकता उनके लिए फैशन की वस्तु नहीं बल्कि भावबोध के स्तर की वस्तु है।

आचार्य द्विवेदी के उपन्यासों में उनके भावबोध का जो स्वरूप बनता है, उसको मूर्त रूप देने में ऐन्द्रिय अनुभवों का बहुत बड़ा योग है। वैसे तो सभी प्रकार के ऐन्द्रिय अनुभव द्विवेदी जी के उपन्यासों में कहीं-न-कहीं मिल जाएंगे, किन्तु दृष्टि सम्बन्धी ऐन्द्रिय संवेदना के चित्रों में एक अद्भुत मूर्तिमत्ता और तीव्रता है। उनके उपन्यासों में भावबोध के विकास की विविध स्थितियों को उनके उपन्यासों में व्यक्त नारी संबंधी भावबोध, प्रकृति संबंधी भावबोध, प्रेम संबंधी भावबोध और साथ ही एक नए रूप में उनके द्वारा उपन्यासों

में प्रयुक्त संस्कृत व अन्य प्राचीन भाषाओं के उद्धृत किए गए उद्धरणों के माध्यम से खोजा जा सकता है। नारी में देवोपम गुण देखने की उनकी दृष्टि प्रायः सभी उपन्यासों में पायी जाती है। “बाणभट्ट की आत्मकथा” का नायक बाणभट्ट नारी शरीर को ‘देवमन्दिर’ के समान मानता है। इसे तत्कालीन स्वच्छन्दतावादी भावधारा का ही एक प्रभाव माना जा सकता है। रवीन्द्रनाथ टैगोर, शरतचन्द्र, जयशंकर प्रसाद और पन्त की तत्कालीन कविताओं में इस विशेष दृष्टि को देखा जा सकता है। नारी-सौन्दर्य में ‘वनदेवी’ की कल्पना करना आचार्य द्विवेदी की केवल एक रोमैन्टिक कल्पना नहीं है, बल्कि उसमें देवी के रूप को देखना द्विवेदी जी की नारी-संबंधी मूल कल्पना का अंग है, क्योंकि यह एक ऐसी सौन्दर्य दृष्टि है, जिसे उन्होंने किसी-न-किसी रूप में लगभग सभी उपन्यासों में दोहराया है। “चारुचन्द्रलेख” के नायक राजा सातवाहन के लिए नायिका चन्द्रलेखा और “पुनर्नवा” के देवरात के लिए मंजुला का यही रूप प्रमुख है। इस आदर्शमूलक नारी चरित्र के अतिरिक्त आचार्य द्विवेदी के उपन्यासों में नारी का एक और रूप दिखाई पड़ता है, जिसमें उसका सौन्दर्य और क्रियाशीलता भी है और कई बार विद्रोह की भावना और सामाजिक मर्यादाओं का अतिक्रमण करने की चेष्टा भी। “अनामदास का पोथा” को छोड़कर शेष सभी उपन्यासों में कोई-न-कोई इस प्रकार का नारी पात्र अवश्य है, जो मर्यादाओं से टकराता है। “चारुचन्द्रलेख” की चन्द्रा इस श्रेणी के नारी पात्रों में सर्वप्रमुख है और इसके बाद “बाणभट्ट की आत्मकथा” की निउनिया और फिर “चारुचन्द्रलेख” की मैना, जो द्विवेदी जी की मूल नारी संबंधी धारणा से थोड़ा भिन्न है। मैना और निउनिया क्रियात्मक भी हैं और स्वयं ही त्याग की भावना भी। पर एक बात सबमें समान रूप से पायी जाती है कि वे सब समाज द्वारा उपेक्षित वर्ग का प्रतिनिधित्व करती हैं और इसीलिए एक सीमा तक स्थापित मर्यादाओं से टकराती भी हैं। वैसे यह भी सच है कि आचार्य द्विवेदी के मन में उच्च वर्ग से आने वाले पात्रों की अपेक्षा इन निचले तबके से आने वाले पात्रों के प्रति अधिक सहानु-मूति है।

आचार्य द्विवेदी के भावबोध के विकास को परखने का एक रूप है कि उपन्यासों में जो वातावरण का चित्रण हुआ है, उसकी परीक्षा करना। “बाणभट्ट की आत्मकथा” में अन्य उपन्यासों की अपेक्षा वातावरण का चित्रण अधिकतर प्रकृति-चित्रण के रूप में हुआ है। उपन्यासों की पृष्ठभूमि या परिवेश के चित्रण के पीछे काम करने वाली कला एवं भावबोध के विकास को लक्षित किया गया है। जहाँ तक प्रेम संबंधी भावबोध का संबंध है, तो आचार्य द्विवेदी का प्रेम संबंधी दृष्टिकोण भी एक ऐसा तथ्य है, जिसमें विकास की रेखाएँ देखी जा सकती हैं। तीन बातें आचार्य द्विवेदी के प्रेम संबंधी भावबोध में विशेष रूप से दृष्टव्य हैं : क—आचार्य द्विवेदी प्रेम को कोई अलौकिक या आध्यात्मिक वस्तु नहीं मानते, वे उसे शुद्ध रूप से भौतिक आचरण मानते हैं, जिसका सामाजिक जीवन से गहरा संबंध है अर्थात् प्रेम एक सामाजिक जीवन की आवश्यकता है, जो मनुष्यों को जोड़ता है। ख—द्विवेदी जी प्रेम और जिसे सामान्य भाषा में वासना कहा जाता है, उसमें कोई विरोध नहीं देखते, बल्कि वे साहसपूर्वक आगे बढ़कर प्रेम-संबंधों में यौन-भावना या कामवृत्ति को स्वीकृति देते हैं और यह बात उन्हें बहुत से रोमैन्टिक लेखकों से अलग करती है। ग—

आचार्य द्विवेदी की प्रेम संबंधी धारणा में थोड़ा सा आदर्शवाद का तत्व भी मिला हुआ है, जिसे रवीन्द्रनाथ टैगोर का प्रभाव भी कहा जा सकता है और उनके पूरे युग की देन भी। यही कारण है कि प्रेम में वे सदैव 'आत्मदान' की बात करते हैं और यह आत्मदान का भाव उनके सभी उपन्यासों में बार-बार दुहराया जाता है। प्रेम के अतिरिक्त आचार्य द्विवेदी जिस प्रकार प्राचीन कविताओं का उपयोग करते हैं अथवा नहीं करते। जैसा कि "अनामदास का पोथा" में नहीं है। उसमें उनकी गहरी सौन्दर्य-दृष्टि, पांडित्य व कलात्मक विशेषता भी छिपी हुई है। "वाणभट्ट की आत्मकथा" से चलकर "अनामदास का पोथा" तक आते-आते उनकी काव्य से आक्रान्त सौन्दर्य-दृष्टि धीरे-धीरे अधिक सहज हो जाती है और इसीलिए काव्य पंक्तियों का अनावश्यक बोझ उपन्यास पर लादने की चेष्टा नहीं की गई है। यह आचार्य द्विवेदी के भावबोध और कला-दृष्टि दोनों के विकास का प्रमाण है।

आचार्य द्विवेदी यद्यपि ऐतिहासिक कथावस्तु को लेकर ही अपने उपन्यासों का निर्माण कर रहे थे, परन्तु उनकी प्रेरणा-भूमि अपने समय की सामाजिक और राजनीतिक परिस्थितियाँ ही थीं। इसी कारण उनके प्रायः सभी उपन्यासों में मुख्यतः पहले तीनों उपन्यासों में सामन्तवाद विरोध की एक दबी हुई चेतना दिखाई पड़ती है, और इस सामन्तवाद-विरोधी चेतना की जड़ें तत्कालीन समाज में अनेक परिवर्तनकारी और क्रान्तिकारी शक्तियों के रूप में विद्यमान थीं। उनके उपन्यासों में जो सामाजिक यथार्थ व्यक्त हुआ है उसका स्वरूप बहुत व्यापक और जटिल है। "अनामदास का पोथा" को छोड़कर शेष सभी उपन्यासों में यह जटिलता अधिक है। जो समाज वहाँ व्यक्त हुआ है, वह वस्तुतः मध्ययुगीन समाज है, जिसमें अनेक श्रेणी भेद और स्तर भेद हैं। उस युग की संस्कृति मूलतः सामन्ती संस्कृति थी, जो उस सामाजिक ढाँचे में पैदा हुई थी, जिसके मूल में सामन्ती व्यवस्था काम कर रही थी। वह समाज वर्णाश्रम व्यवस्था पर टिका हुआ समाज था। जिसकी सामाजिक स्थितियों का निर्धारण शास्त्र की पूर्वनिर्धारित मान्यताओं, जो कि उच्चतम वर्ग अर्थात् पुरोहित वर्ग द्वारा अपने हितों को ध्यान में रखकर बनायी गयी थीं, के द्वारा होता था। परन्तु इसके समानान्तर एक विरोधी विचारधारा भी तत्कालीन समाज में निरन्तर चली आ रही थी, इस विचारधारा और उससे जुड़ी हुई संस्कृति का प्रतिनिधित्व तत्कालीन समाज में वे लोग करते थे, जिन्हें उस समय की भाषा में वाममार्गी कहा जाता था। इस वाममार्ग में तन्त्रविद्या और हठयोग विद्या आदि का बहुत अधिक प्रचलन था। इन वाममार्गी साधकों द्वारा पुरोहित वर्ग द्वारा प्रचारित मान्यताओं के खण्डन की जो प्रवृत्ति तत्कालीन समाज में चल रही थी, एक उपन्यासकार के रूप में आचार्य द्विवेदी उसके प्रति अपनी सहानुभूति जगह-जगह व्यक्त करते हैं, और उस पूरी बंधी-बंधायी व्यवस्था पर चोट करते हैं, जो उनकी आधुनिक दृष्टि का ही परिचायक है। यह प्रवृत्ति किसी-न-किसी रूप में उनके अन्तिम उपन्यास को छोड़कर प्रायः सभी उपन्यासों में पायी जाती है। लेकिन इसके साथ ही वे कोरी तन्त्र विद्या और हठयोग का भी उपहास उड़ाते हैं और एक साधक से किसान को बड़ा सिद्ध करते हैं क्योंकि वह कर्म से जुड़ा हुआ है। इसके साथ ही आचार्य द्विवेदी अपने उपन्यासों में बार-बार धार्मिक संस्कार और परिमार्जन की बात करते हैं। उन्हें ये लगता है कि धर्म का जो स्वरूप है, वह धार्मिक संस्थाओं से बड़ा है। इसीलिए वे संस्थावद्ध धर्म

का विरोध करने के साथ ही बँधी-बँधायी सामाजिक व धार्मिक व्यवस्थाओं के परिष्कार की बात खुले शब्दों में करते हैं। यह भी उनकी आधुनिक दृष्टि का ही परिचायक है।

जहाँ तक आचार्य द्विवेदी के उपन्यासों में व्यक्त राजनीतिक चेतना का प्रश्न है, सो उनके उपन्यासों की मूल-चेतना यद्यपि सांस्कृतिक है, परन्तु ऐसा नहीं कहा जा सकता कि उस सांस्कृतिक चेतना के पीछे कोई राजनीतिक चेतना छिपी हुई नहीं है। उदाहरण के तौर पर “वाणभट्ट की आत्मकथा” उस ऐतिहासिक पृष्ठभूमि पर लिखा गया है, जब देश में स्वाधीनता आन्दोलन चल रहा था। अतः यह ध्यान देने योग्य बात है कि यद्यपि स्थूल रूप से स्वाधीनता आन्दोलन का कोई उल्लेख उसमें नहीं मिलता, परन्तु प्रायः पूरे ही उपन्यास में विदेशी आक्रमणों से देश की रक्षा की बात बार-बार दुहरायी गयी है। यह भी अनेक बार कहा गया है कि देश के राजा तथा सामन्त उस विदेशी आक्रमण का सामना करने में पूर्णतः समर्थ नहीं हैं। आचार्य द्विवेदी की राजनीतिक चेतना इसी प्रकार काम करती है। वे प्रत्यक्ष रूप से राजनीतिक विवादों में कम पड़ते हैं। परन्तु पात्रों की बातचीत में अनेक स्थलों पर यह देखा जा सकता है कि राजतन्त्र और शासन व्यवस्था पर भी अपना मत प्रकट करते हैं और इस प्रकार के कथनों में उनकी राजनीतिक चेतना को परिलक्षित किया जा सकता है।

आचार्य हजारी प्रसाद द्विवेदी एक चिन्तक और संस्कृति के अगाध पंडित के रूप में जाने जाते हैं। उनकी सांस्कृतिक दृष्टि मुख्यतः लोकवादी है, परलोकवादी नहीं। वे इस लोक और इस लोक में रहने वाले मनुष्य को ही तथा उसकी समस्त रचनात्मक क्रियाओं को ही संस्कृति की अभिव्यक्ति के रूप में देखते हैं। इसीलिए उनकी सांस्कृतिक दृष्टि में विज्ञान का विरोध नहीं है। वे विज्ञान को मनुष्य के विकास में सहायक मानते हैं और यह भी मानते हैं कि विज्ञान संस्कृति का विरोधी नहीं है, बल्कि उसे गति और विस्तार देने वाला एक तत्व है। आचार्य द्विवेदी की यह मानवतावादी और विज्ञानमूलक दृष्टि उनके उपन्यासों में अनेकों स्थलों पर अभिव्यक्त हुई है। आचार्य द्विवेदी ने अपने सम्पूर्ण लेखन में किसी-न-किसी संदर्भ में मध्यकालीन संस्कृति और युग की व्याख्या की है। वे संस्कृति की जातीय या राष्ट्रीय सीमा को स्वीकार करते हुए भी उसके व्यापक मानवीय स्वरूप पर अधिक बल देते हैं। इसीलिए उन्होंने भारतीय समाज के न केवल बाहरी जीवन पर बल्कि चित्रकला, संगीत और नृत्य आदि कलाओं तक पर भी बाहरी संस्कृति के प्रभाव की बात को विशेष रूप से स्वीकार किया है। उनके अनुसार ‘मनुष्य की श्रेष्ठ साधनायें ही संस्कृति हैं।’

आचार्य द्विवेदी के उपन्यासों के संदर्भ में एक और बात जो विशेष रूप से उल्लेखनीय है वह है उनकी औपन्यासिक पात्रों की अवतारणा। उनके उपन्यासों में मुख्य रूप से दो प्रकार के पात्र दिखाई पड़ेंगे। एक—वे पात्र जो समाज की तत्कालीन स्थापित परंपरा के प्रतिनिधि हैं और दूसरे—वे जो डा० नामवर सिंह के शब्दों में “दूसरी परंपरा के प्रतिनिधि पात्र हैं” अर्थात् जो अपने समय की सारी मर्यादाओं व स्थापित परंपराओं से टकराते हैं। पहले प्रकार के पात्र भी उपन्यास में महत्वपूर्ण भूमिका निभाते हैं, परन्तु दूसरे प्रकार

के पात्र आचार्य द्विवेदी के दृष्टिकोण एवं उनकी विचारधारा को समझने के लिए अधिक महत्वपूर्ण जान पड़ते हैं। इन्हीं पात्रों के माध्यम से आचार्य द्विवेदी की आधुनिक दृष्टि व चेतना सबसे अधिक व्यक्त हुई है। इस श्रेणी के पात्रों में मुख्य रूप से सुमेर काका, निउनिया, बाणभट्ट, सीदी मोला, अधोरनाथ, अधोर भैरव, महामाया आदि के साथ चन्द्रा व मैना को भी रखा जा सकता है।

इस संपूर्ण विवेचन के बाद यदि हम आचार्य द्विवेदी की औपन्यासिक भाषा पर विचार करें, तो पाते हैं कि वह अपने पूर्ण वैविध्य और वैभव के साथ अभिव्यक्त हुई है। अन्य भाषा के संग्राहक शब्दों की शक्ति यहाँ भी मौजूद है। वैसे द्विवेदी जी भी भाषा पर सामान्यतः दुरुहता का जो आरोप लगाया जाता है, वह एक सीमा तक उपन्यासों की भाषा में भी मौजूद है, किन्तु यहाँ इस प्रकार की भाषा के प्रयोग के पीछे उनके उपन्यासों का कथानक और तत्कालीन परिवेश रहा है। “बाणभट्ट की आत्मकथा” की शैली को इस रूप में प्रस्तुत करने के पीछे उपन्यास में विश्वसनीयता एवं स्वाभाविकता लाने के लिए कुछ अर्थों में संस्कृत कवि बाणभट्ट की शैली से तालमेल बैठाना आवश्यक था। “चारु-चन्द्रलेख” में भाषा सहज तो नहीं हुई है, पर समाज छूट गए हैं। साथ ही तत्सम प्रधान भाषा का बोझ भी हल्का हुआ है। “पुनर्नवा” में आकर द्विवेदी जी की भाषा में पूर्णतः बदलाव आया है, क्योंकि इसका कथानक ही अन्य उपन्यासों की अपेक्षा कहीं अधिक संवेगात्मक संभावनायें लिए हुए है। वाक्य छोटे-छोटे हैं—इसीलिए भाषा का तनाव जाता रहा है। “अनामदास का पोथा” की भाषा एक बार फिर अपने कथानक के अनुरूप ही पुनः मध्यकालीन इतिहास से भी दूर प्रागैतिहासिक काल में ले जाती है, जिसमें अग्नि, जल, वायु, सूर्य आदि प्राकृतिक पदार्थों का बहुत अधिक महत्व है। भाषा के अतिरिक्त यद्यपि बिम्ब, प्रतीक और मिथक आदि कविता के अंग हैं, किन्तु आचार्य द्विवेदी ने अपने उपन्यासों में भी इनका सफल प्रयोग करके हिन्दी उपन्यास को एक नया रूप दिया है। इसके अतिरिक्त आचार्य द्विवेदी के औपन्यासिक शिल्प की नवीनता के रूप में उनकी छद्म नाम से लिखने की कला अर्थात् डा० नामवर सिंह के शब्दों में “मुखौटे की प्रविधि” को भी रखा जा सकता है।

अब यदि हिन्दी की ऐतिहासिक उपन्यास कला से आचार्य द्विवेदी के उपन्यासों को जोड़कर देखें, तो एक सीमा तक अपनी पूर्ववर्ती ऐतिहासिक उपन्यास कला को स्वीकार करते हुए भी उन्होंने उसमें पूरी तरह नवीनता लाने की चेष्टा की है, जिसमें प्रमुख है उनका अपना दृष्टिकोण, कि वे “गप्प” में भी इतिहास को ले आते हैं। वस्तुतः यह “गप्प” उनकी विलक्षण कथा-शैली का ही लोक परक नाम है। उन्होंने हिन्दी उपन्यास की परंपरा और विशेष रूप से ऐतिहासिक उपन्यास की परंपरा को न केवल कथावस्तु की दृष्टि से, बल्कि भाषा व शिल्प की दृष्टि से भी एक नया मोड़ दिया है। उन्होंने पाश्चात्य उपन्यास कला से प्रभावित हिन्दी उपन्यास-कला के स्वरूप को सुरक्षित रखते हुए भी उसमें भारतीय कथा-शिल्प के रंग को भरने की सफल चेष्टा की है। इसलिए न केवल भावबोध के स्तर

पर बल्कि भाषा-शैली एवं शिल्प की दृष्टि से भी हिन्दी उपन्यास-कला में आचार्य द्विवेदी का विशिष्ट स्थान है ।

अध्ययन का क्रम :

उपरोक्त निष्कर्ष निम्नलिखित सात अध्यायों में प्रस्तुत किए गए हैं—

1. आचार्य द्विवेदी के उपन्यासों का विकास क्रम ।
2. ऐतिहासिक कल्पना और आधुनिक चेतना का द्वन्द्व ।
3. आचार्य द्विवेदी के उपन्यासों की संरचना में भावबोध की स्थिति ।
4. आचार्य द्विवेदी के उपन्यासों में सामाजिक दृष्टि ।
5. दूसरी परम्परा की अवधारणा और आचार्य द्विवेदी के उपन्यासों की सांस्कृतिक बनावट ।
6. आचार्य द्विवेदी की औपन्यासिक परिकल्पना और आधुनिक कथा-शिल्प के विविध रूप ।
7. भारतीय उपन्यास की परिकल्पना और आचार्य द्विवेदी की औपन्यासिक कृतियाँ ।

स्वतंत्रता आंदोलन के संदर्भ में प्रसाद की काव्य चेतना का अध्ययन

रीता तिवारी

निर्देशक : डॉ० केदारनाथ सिंह

प्रस्तुत शोध प्रबंध में प्रसाद की काव्यचेतना की संपूर्ण विकास यात्रा को रेखांकित करने का प्रयास किया गया है। अब तक के किए गए अध्ययनों से इस अध्ययन का अंतर यह है कि पहली बार इस सम्पूर्ण विकास यात्रा को स्वाधीनता आंदोलन की विस्तृत पृष्ठभूमि में रखकर देखने का प्रयास किया गया है। प्रसाद के काव्य में अपने समय की सामाजिक राजनैतिक परिस्थितियों का यह प्रभाव सूक्ष्म रूप में फलित हुआ है। इसलिए उसकी प्रकृति सीधे-सीधे राष्ट्रीय कहे जाने वाले कवियों की काव्यप्रकृति से सर्वथा भिन्न है। हम इस विस्तृत अध्ययन के द्वारा जिस निष्कर्ष पर पहुँचे हैं, उनका सार संक्षेप में इस प्रकार है :

प्रथम अध्याय में स्वतंत्रता आंदोलन के क्रमिक विकास को प्रस्तुत किया गया है। सन् 1757 में ब्रिटिश साम्राज्य प्रारंभ हुआ और सन् 1947 में इसका अंत हो गया। इस बीच जो भी विद्रोह तथा प्रदर्शन हुए उसे स्वतंत्रता आंदोलन का नाम दिया जाता है। कम्पनी का विरोध तो महाक्रांति से पहले ही हो रहा था। भारत के सभी प्रांतों में दंगे व प्रदर्शन व्याप्त थे। सन् 1885 का संथाल जाति का आरम्भिक विन्दु मानते हैं। सन् 1857 की क्रांति का मुख्य कारण लार्ड डलहौजी की अपहरण की नीति थी। इसके अतिरिक्त देशी राजा व नवाबों से दुर्व्यवहार भी था। इन सब प्रयासों के बाद वे भारतीय धर्म व संस्कृति को नष्ट कर उन्हें मानसिक रूप से भी अपंग बना रहे थे। इसीलिए सन् 1857 में भारतवासी अपनी सारी शक्ति एकत्रित करके क्रांति पर बैठे। इस क्रांति की शुरुआत दमदम की छावनी में एक सिपाही के माध्यम से हुई। क्रांति असफल रही क्योंकि यह योजनाबद्ध रूप में नहीं थी और अस्त्र भी आधुनिक न थे।

क्रांति के बाद असफलता के निराश वातावरण में भारतीय विद्वानों ने नवजागरण की चेतना संचार किया। इसके अन्तर्गत भारतीय व पाश्चात्य संस्कृति का तुलनात्मक अध्ययन कर सार प्रस्तुत किया गया जिससे भारतीय हीनभावना को छोड़कर गर्व का अनुभव करने लगे। इस जागृति के फलस्वरूप भारतीय राजनैतिक रूप से भी स्वतंत्र होने के लिए छटपटाने लगे। इसी के फलस्वरूप सन् 1885 में राष्ट्रीय कांग्रेस की स्थापना की

गई। ब्रिटिश सरकार और भारतवासी, दोनों ही कांग्रेस का अपने-अपने हित में प्रयोग कर रहे थे। इसके बाद सन् 1905 के बंगमंग के कारण सम्पूर्ण राष्ट्र में बहिष्कार और विद्रोह की लहर फैल गई। कांग्रेस में दो दल बन गए, गरम दल और नरम दल। इसके बाद सन् 1914 में प्रथम विश्व युद्ध में भारतीय सेना व असले का प्रयोग किया गया और सभी देशों पर बलपूर्वक संधि लाद दी गई। युद्ध के बाद भी नरम दल को स्वराज न मिला, साथ ही कांग्रेस में उसका जोर कम हो गया। और वह सीधे जनता की भावनाओं को व्यक्त करने लगी।

ऐसे में गांधी जी अपने नरम व गरम व्यक्तित्व का सामन्जस्य लेकर प्रकट हुए। सन् 1919 में जलियाँवाला हत्याकांड हुआ और इसके बाद सन् 1920 में असहयोग आन्दोलन चला जिससे सारी जनता उमंग से भर उठी, पर चौरीचौरा कांड के बाद आन्दोलन रोक दिया गया। जनता इस कारण क्षोभ से भर उठी। इसके बाद गांधी जी को कैद कर लिया पर बीमारी के कारण रिहा कर दिया गया। सन् 1922 में गांधी-दास-एक्ट के बाद गांधी जी खादी प्रचार में लग गए और स्वराज पार्टी आन्दोलन का संचालन करने लगी। इस पार्टी की नीति वामपंथी अर्थात् गांधी विरोधी थी। इसलिए यह जनता से दूर रह गई। इसके बाद गांधीजी ने नेहरू को कांग्रेस का अध्यक्ष बनाकर राज-नीतिक बिखराव कम कर दिया।

सन् 1927 में साइमन कमीशन की स्थापना होने पर उसका विरोध हुआ और लाला लाजपत राय इसी आंदोलन में मारे गए। सन् 1930 में इसकी रिपोर्ट में कहा गया कि भारत स्वराज के लिए अयोग्य है वहाँ एक धर्म व जाति नहीं है। ऐसे निर्णय के बाद पूर्ण स्वराज्य की घोषणा की गई। सन् 1939 में कांग्रेस वामपंथी व दक्षिणपंथी दलों में बंट गई सबने ऐसा करने से रोका तो वामपंथी इससे बाहर आकर क्रांतिकारी कार्य करने में लग गए। दोनों दल स्वतंत्रता चाहते थे। पर एक माँग कर दूसरा बलपूर्वक छीन कर। ऐसे में ही द्वितीय विश्वयुद्ध हुआ। इस युद्ध में भारतीयों ने सहयोग न देने का निर्णय दिया। इसमें घुरी शक्तियाँ जीतीं और इसके बाद जर्मनी का वितरण भी निष्पक्ष रूप से हुआ और शांति संधि भी स्वेच्छा से की गई इसीलिए अब तक बरकरार है। इसी दौरान “भारत छोड़ो” आन्दोलन भी चला जो निश्चय ही स्वतंत्रता आन्दोलन का अंतिम चरण था और अंत में 1947 में चिर प्रतीक्षित स्वतंत्रता मिली।

इस सम्पूर्ण आन्दोलन का प्रतिफल सभी भारतीय भाषाओं में हुआ है। पर हिन्दी को प्रारंभ से ही राष्ट्रभाषा के रूप में रखा गया है अतः इसमें इस आन्दोलन की लगभग सभी गतिविधियाँ निहित हैं। यूँ तो भारतेन्दु युग से ही इसका प्रभाव दिखाई देता है जो द्विवेदी युग से होता हुआ प्रसाद युग में जा पहुँचा। अंतर केवल इतना हुआ कि पहले वह मूर्त रूप में था अब सूक्ष्म रूप में। स्वच्छंदतावाद में इस संपूर्ण आंदोलन की अभिव्यक्ति परोक्ष से हुई है। जयशंकर प्रसाद इस घारा के प्रमुख कवि हैं तथा इस सम्पूर्ण आन्दोलन की पृष्ठभूमि पर उनकी काव्य रचना होती है।

द्वितीय अध्याय में इस बात का विश्लेषण किया गया है कि नवजागरण की चेतना स्वच्छदतावादी काव्य में कहां तक निहित है। सर्वप्रथम नवजागरण को परिभाषित किया गया है। विश्व स्तर पर कब और कैसे नवजागरण हुआ ? इसके लिए यूरोपीय नवजागरण का भी विवरण दिया है। वहां के नवजागरण से प्रभावित हो भारत में भी नवजागरण आया। पर दोनों की प्रकृति में अंतर था। दोनों अपने देशकाल में अपने देशकाल के अनुकूल थे। नवजागरण किसी एक नवीन विद्या के प्रत्यावर्तन में नहीं वरन् जीवन के सभी क्षेत्रों में यथा आर्थिक, राजनीतिक, सामाजिक साहित्यिक और नैतिक क्षेत्र में कुछ नूतन घटित होना ही नवजागरण का परिचायक है। भारत की सभी प्रांतीय भाषाओं ने भी नवजागरण के लक्षण स्पष्ट हैं। हिन्दी साहित्य भी इस सांस्कृतिक नवजागरण से प्रभावित था और इतना प्रभावित था कि इसका उदय एक नई चेतना की अभिव्यक्ति के रूप में हुआ। इस नवजागरण का मूल कारण यूरोपीय तथा भारतीय संस्कृति की टकराहट था।

नवजागरण ने स्वाधीनता आन्दोलन को भी प्रभावित किया इससे पहले सन् 87 की क्रांति के असफल होने के कारण प्रत्यक्षरूप से आन्दोलन की गति समाप्त हो गई। इसके विपरीत परोक्ष रूप से समाज और व्यक्ति को जागृत करने का काम साहित्य ने किया। उस काल के साहित्यकारों ने जनता के मन में स्वाधीनता की चेतना जगाई। नवजागरण के फलस्वरूप राजभक्ति राष्ट्रभक्ति में परिणित हो गई। समाज जो अपने ही रूढ़िजाल में उलझा हुआ था उसे काटकर इसी युग में सजग हुआ। भारतीय संस्कृति के अतीत गौरव को नये सिरे से जानकर भारतीय उसे पुनः प्राप्त करने में लग गए। वे अपना आत्मबल इसी नवजागरण के माध्यम से मजबूत कर सके। इस नवजागरण से प्रेरणा ले भारतीय हर ओर से स्वतंत्र होने का प्रयास करने लगा जिसमें आर्थिक, राजनीतिक, सामाजिक और नैतिक सभी क्षेत्र थे। नवजागरण का मूलतंत्र उन्मुक्ति का अहसास था। अतः इससे स्वाधीनता के लिए संघर्ष करने की प्रेरणा मिली। जिस प्रकार नवजागरण अर्द्ध सुप्त अवस्था में जागृत हो कुछ नई चेतना पाना है उसी प्रकार पुनर्जागरण का अर्थ जागृत अवस्था में जो बुराईयाँ हैं उन्हें दूर करना है। हिन्दी साहित्य में नवजागरणकाल भारतेन्दु युग को माना जाता है और पुनर्जागरणकाल द्विवेदी युग को। इन दोनों के तुलनात्मक अध्ययन से अर्थ स्पष्ट हो जाता है। नवजागरणकाल में नवीनता की धुन में जो कुछ अपनाया गया उसका परिष्कार पुनर्जागरणकाल में हुआ।

भारत में नवजागरण का उस जाति, प्रांत तथा भाषा के अनुसार थोड़ा भिन्न था। सर्वप्रथम बंगाल ने ही इसकी शुरुआत की। राजनीतिक स्तर पर वहाँ राष्ट्रीयता का आन्दोलन चला और साहित्यिक स्तर पर रोमान्टिकवाद का। महाराष्ट्र में सुधार के स्थान पर नष्ट कर नए की कल्पना की गई यहाँ लोकमान्य तिलक क्रांति के माध्यम से नवजागृति और स्वराज लाने की बात कर रहे थे। गुजरात में दयानन्द सरस्वती के माध्यम से आध्यात्मिक स्तर पर नवजागरण हुआ। भारत के अन्य भागों में भी समाजसुधारक नवचेतना के द्वारा जागरण हुआ। हर जाति ने नई चेतना का अनुभव

किया और उसे अपनी ही भाषा में अभिव्यक्ति दी। हर भाषा में नवजागरण के तत्व तो समान थे पर उन्हें अभिव्यक्त करने का ढंग अलग था। हिन्दी भाषा भारतेन्दु युग से उन तत्वों को समेटती हुई और द्विवेदी में परिष्कार पाकर छायावाद में अपने उत्कृष्टतम रूप में प्रकट हुई। स्वच्छंदतावाद का उदय इसी नवजागरण के गर्भ से हुआ। यूरोप तथा भारत दोनों में स्वच्छंदतावाद के उदय की परिस्थितियाँ लगभग समान ही थी। दोनों ने तत्कालीन राजनीतिक व्यवस्था से मुक्ति की कामना की। समाज की रूढ़िप्रस्तता पर प्रहार किया। व्यक्ति स्वातंत्र्य पर बल देकर आत्मविश्वास जगाया। प्राचीन अंधविश्वासों का विरोध कर अतीत के गौरवपूर्ण इतिहास का वर्णन किया। दोनों ही स्थूल से सूक्ष्म की ओर बढ़े। अब तक साहित्य में रीतिबद्धता और शास्त्रीयता का प्राधान्य था। इसी व्यवस्था का विरोध स्वरूप स्वच्छंदतावाद के रूप में प्रकट हुआ। यूरोप का रोमांटिकवाद बंगाल में स्वच्छंद प्रवृत्ति लेकर आया और बंगाल की यह प्रवृत्ति हिन्दी में स्वच्छंदतावाद या छायावाद के रूप में चली जो यूरोप और बंगला दोनों के वादों से भिन्न थी जबकि तत्व सभी के समान हैं। स्वच्छंदतावाद के उदय का प्रमुख कारण तत्कालीन मुक्ति संघर्ष ही था।

बंगीय पृष्ठभूमि भारतीय इतिहास और साहित्य में विशिष्ट स्थान रखती है। बंगभंग के विरोध में जो आन्दोलन चले वे राष्ट्रीय आन्दोलन के रूप में परिणत हुए। वहाँ यूरोप के रोमान्टिकवाद से प्रभावित हो जो साहित्यिक आन्दोलन चला वह हिन्दी साहित्य में स्वच्छंदतावाद के रूप में आया। नवजागरण के अन्तर्गत रवीन्द्रनाथ टैगोर संपूर्ण बंगाल के केन्द्र बिन्दु रहें। उनसे सम्पूर्ण भारतीय भाषाओं का साहित्य प्रभावित है क्योंकि उन्हें गीतांजलि के लिए नोबेल-पुरस्कार मिला था। राजनीति में जो स्थान गाँधी जी का था उससे कुछ अधिक ही रवीन्द्रनाथ टैगोर का स्थान साहित्य के क्षेत्र में था। तत्पूगीन सम्पूर्ण चेतना तो रवीन्द्रनाथ में परिलक्षित होती ही है साथ ही भविष्य का एक चित्र भी वे नियोजित कर देते हैं जो आगामी पीढ़ी के ही समझ आता है। इन्हीं गुणों के कारण वे हिन्दी साहित्य के स्वच्छंदतावाद के स्त्रोत्र बन गए। स्वच्छंद का अर्थ ही स्वतंत्र होना होता है। तत्कालीन परतंत्र राष्ट्र की चेतना में स्वच्छंदतावाद के स्वतंत्रता का मंत्र फूंक दिया। स्वच्छंदतावादी कवि विद्रोह और क्रांति की प्रेरणा देता है। स्वच्छंदतावादी कवियों की चेतना साहित्य में भारत बंदना की ओर प्रवृत्त होती है और अपनी मातृभूमि के प्रति पूर्ण रूप से समर्पित होती है। जब वे अपनी शक्ति के अनुसार अतीत को परखते हैं तो पतन के कारण वर्तमान की दशा पर क्षोभ प्रकट करते हैं। प्रसाद में भी यह प्रवृत्ति दिखाई पड़ती है।

स्वदेशी आन्दोलन का चित्रण कर राष्ट्रीय चेतना को उद्बुद्ध करने में सहायता करता है और जातीय तथा धार्मिक एकता बनाए रखने की प्रेरणा देता है। तत्पूगीन नवजागरण के संदेश भी स्वच्छंदतावादी साहित्य में प्राप्य है। यदि यह कहा जाय कि स्वच्छंदतावाद मूल रूप से स्वतंत्रता आन्दोलन का ही काव्यात्मक, सूक्ष्म तथा अन्तर्मुखी रूप है तो अतिशयोक्ति न होगी। स्वच्छंदतावाद में अखंड राष्ट्रीय चेतना मुखर हुई है।

राजनीतिक स्तर पर जो तीन धाराएँ स्वतंत्रता पाने के लिए चल रही थी उन्हीं का सम-रूप इस काव्य में अभिव्यक्त हुआ है। अतः इस काव्य में काव्य चेतना और राष्ट्रीय चेतना दोनों ही स्वच्छंद तत्व से अनुप्राणित थी। प्रसाद के असंख्य गीतों और नाटकों में इस चेतना की आलंकारिक अभिव्यक्त हुई।

हिन्दी साहित्य में स्वच्छंदता की चेतना का आरंभिक रूप भारतेन्दु युग में ही मिलने लगा। श्रीधर पाठक को इस परंपरा का प्रवर्तक माना जाता है। इन्होंने यूरोपीय रचनाओं के प्रभाव अपनी कल्पना में मिश्रित कर नये रूप में पुनः सृजित किया। इससे स्पष्ट होता है कि कवि नवीनता और स्वच्छंदता की ओर उन्मुख होने लगा था। इन्होंने पुरानी परिपाटी से हट कर नवीन भावों तथा भाषा का प्रयोग किया। रामनरेश त्रिपाठी भी इसी परंपरा को गति देते हैं। इनकी रचनाओं में जो तत्त्व मिलते हैं वे छायावाद के ही आरम्भिक तत्व हैं। इसके अतिरिक्त मैथिलीशरण गुप्त भी स्वच्छंद प्रवृत्ति की रचनाएं करते हैं। उनकी भाषा पर द्विवेदी जी का प्रभाव है परन्तु भाव बार-बार स्वच्छंदता की ओर मुड़ जाते हैं और लगता है कि वे बलपूर्वक सुधारवादी कविता करने का प्रयास कर रहे हैं। मुकुटधर पाण्डेय की आरम्भिक रचनाओं में जो चेतना है उसी का चरम विकास जयशंकर प्रसाद में देखा जा सकता है। स्वच्छंदतावाद के विकास का अध्ययन तीन चरणों में किया गया है। प्रथम चरण में सन् 1957 की क्रांति से लेकर बाद तक का प्रभाव देखा जा सकता है। यह काल भारतेन्दु हरिश्चन्द्र की रचनाओं का था वे देश की स्थिति का भी चित्रण कर रहे थे और नवीनता के स्तर पर कर रहे। इस चरण में स्वच्छंदता के अंकुर स्पष्ट रूप से पहचान में नहीं आ रहे थे पर प्रस्फुटित हो चुके थे। द्वितीय चरण में द्विवेदी युग था जब इस नवीन चेतना का परिष्कार हुआ पर इतिवृत्तात्मकता से परे इस युग में भी स्वच्छंद भावों से युक्त रचनाएँ उपलब्ध थीं। सर्वाधिक महत्वपूर्ण बात यह रही कि इस चरण में खड़ी बोली का विकास हुआ जिसके कारण स्वच्छंदतावाद के विकास की गति भी तीव्र हो गई। तृतीय चरण में स्वच्छंदतावाद द्रुत गति से विकसित हुआ। इसके चार कवि, प्रसाद, पंत, निराला और महादेवी थे जिनकी रचनाओं के द्वारा स्वच्छंदतावाद चरमोत्कर्ष पर पहुँच गया। निराला इसके बाद क्रांतिकारी रहे। पंत विकास से हर चरण को अपने काव्य में प्रतिबिम्बित है। महादेवी जी ने स्वयं को वेदना में केन्द्रित किया परन्तु जयशंकर प्रसाद तो पूरे छायावाद का पर्याय ही बन गए। ऐसी कोई भी प्रवृत्ति न थी जो उनके साहित्य में न हो। इनके अतिरिक्त रामकुमार वर्मा ने भी कुछ रचनाएँ इस बात को समर्पित की हैं जो नगण्य नहीं।

“इंदु” एक तत्पुगीन पत्रिका थी जो जयशंकर प्रसाद की प्रेरणा से सन् 1913 में अंबिका प्रसाद के संपादन में प्रकाशित हुई थी। वैसे तो सरस्वती ही प्रतिनिधि पत्रिका थी पर “इंदु” की भूमिका भी महत्वपूर्ण रही। यह पत्रिका थोड़ी अन्तर्मुखता लिए थी इसीलिए सर्वसाधारण इसमें रुचि कम लेता था। कुछ उच्च स्तर के लोग ही इसके नियमित पाठक थे। इसने स्वतंत्रता की चेतना को फैलाने में सहयोग दिया। इसके लेख कुछ इसी प्रकृति

के थे। इसमें स्वच्छंदप्रवृत्ति की रचनाएं अधिक प्रकाशित होती थी इसलिए स्वच्छंदता की चेतना का प्रसाद भी इसके माध्यम से संभव हो सका।

तृतीय अध्याय में प्रसाद की काव्य यात्रा के प्रथम चरण का अध्ययन तत्कालीन सामाजिक और राजनीतिक परिस्थितियों के संदर्भ में किया गया है। प्रसाद की रचनाएँ 1909 से प्रकाश में आईं। इससे पहले बंग विभाजन हो चुका था जिसके परिणामतः विद्रोह का वातावरण बन चुका था। सरकार द्वारा निर्दयतापूर्वक दमन किए जाने के कारण निराशपूर्ण वातावरण था। प्रथम चरण में 1909 से 1918 तक की रचनाओं का विश्लेषण प्रस्तुत किया गया है। तब तक गाँधी जी का भी राजनीति में प्रवेश हो चुका था और प्रथम विश्वयुद्ध भी हो चुका था। इस काल के साहित्य में सुधारवाद का आन्दोलन चल रहा था जिसमें निम्न वर्ग तथा स्त्रियों की दशा सुधार का प्रसंग प्रमुख था। अछूतोंद्वारा का कार्यक्रम भी चल रहा था। साम्प्रदायिक सद्भाव बनाए रखने का प्रयास किया गया। प्रथम विश्व युद्ध के प्रभाव से सभी आतंकित थे। सन् 1917 में रूस में बोल्शेविकों द्वारा क्रांति हुई, जिसका प्रभाव निश्चय ही भारत के स्वाधीनता आन्दोलन और साहित्य पर पड़ा। असहयोग आन्दोलन भी चला जिसका प्रसाद साहित्य पर क्या प्रभाव पड़ा इसका इस अध्याय में विवेचन किया गया है।

प्रसाद संवेदनशील तो थे ही इसलिए तत्कालीन घटनाओं के कारण उनके हृदय में जो प्रतिक्रिया हुई उसे वे काव्य में अभिव्यक्त किए बिना न रह सके। चित्राधार प्रसाद का प्रथम संग्रह है। इस समय प्रसाद सरल भाव व भाषा में रचना करते थे। उनकी रचनाओं में प्रेम प्रमुख विषय है। चित्राधार महाराण का महत्त्व, कृष्णालय, काननकुसुम तथा प्रेम-पथिक में प्रेम का ही प्राधान्य है। ये रचनाएँ अधिकतर प्रभाव ग्रहण कर ही रची गई हैं। इनमें छायावाद की सभी प्रवृत्तियाँ मिल जाती हैं। प्रसाद प्रेम की हर स्तर पर परख कर खरे सोने का सा बना देते हैं। प्रसाद की इन रचनाओं में रहस्य भावना के संकेत भी मिल जाते हैं। इस रहस्य भावना का कारण तत्कालीन सामाजिक संदर्भ हैं। ब्रिटिश प्रशासन के दबाव के कारण कुछ भी स्पष्ट कह पाना कठिन था इसी कारण वे एक आवरण में रखकर सत्य को प्रकट करते हैं जिसे सब अपनी पहुँच के अनुसार ग्रहण कर लेते हैं और इसी कारण रहस्यमयता भी आ जाती है।

भरना प्रसाद की सर्वथा मौलिक रचना है। इसे छायावाद या स्वच्छंदतावाद का प्रथम विस्फोट भी माना जाता है। इसमें कवि की अभिव्यक्ति भरना के वेग के समान थोड़ी उच्छृंखल रूप में हुई है। इससे पूर्व की रचनाओं पर द्विवेदी बाल का प्रभाव दिखता है। यह सारे अंकुश को तोड़कर प्रकट हुई रचना है। इसमें कवि की व्यक्तिगत अनुभूति है। यह काव्य परम्परागत छंदों का प्रयोग नये ढंग से करता है। भरना एक गीतिरचना है क्योंकि इसमें आत्माभिव्यक्ति है, सहजता है, आवेग है और माधुर्य के साथ अनुभूति की तीव्रता भी परिलक्षित होती है। कवि की अनुभूति का आधार तो तत्सुगीन परिस्थितियाँ और समाज ही होता है अतः "भरना" की उच्छृंखल

गति स्वतंत्र होने की उत्सुकता को परिलक्षित करती है। इस समय खड़ी बोली को राष्ट्र के स्वाभिमान का पर्याय बना लिया था और प्रसाद ने भरना की रचना खड़ी बोली हिन्दी में करके राष्ट्रीयता का ही परिचय दिया। वैसे भी भरना में प्रसाद की राष्ट्रीय चेतना की अभिव्यक्ति परोक्ष रूप से की है। हर स्थल पर उन्मुक्त होने की आशंका इस बात का प्रमाण है। वे भरना में आमूल परिवर्तन और कुछ नवीन का संचरण करने की भी बात करते हैं जो तत्कालीन जागृति का परिणाम है। “भरना” की रचनाएँ द्विअर्थी है जिसमें एक ओर तो प्रेम ध्वनित होता है और दूसरी ओर अंग्रेजी सरकार पर व्यंग्यमयी वाणी प्रकट होती है।

चतुर्थ अध्याय में सर्वप्रथम 1918 से लेकर 1933 तक की सामाजिक और सांस्कृतिक स्थिति का चित्रण किया गया है। इस काल की मुख्य राजनीतिक घटनाएँ हैं—रीलेट एक्ट पास होना, जलियाँ वाला कांड, असहयोग आन्दोलन, साइमन कमीशन की रिपोर्ट आना आदि-आदि। इसके साथ ही सांस्कृतिक उत्थान की प्रक्रिया तो गतिशील थी ही। आन्दोलन को गांधी जी ने हिंसा के डर से बीच में ही रोक दिया था इसलिए प्रसाद की रचनाओं में एक निराशा, एक विवशता और एक क्षोभ उभरता है। एक निराशा की अभिव्यक्ति तो प्रारंभ से ही उनके काव्य में मिलती है। धीरे-धीरे परिस्थितियों की सघनता के कारण यह निराशा घनी हो जाती है।

आँसू में प्रसाद ने व्यक्तिगत वेदना के आवरण में सम्पूर्ण राष्ट्र की वेदना और इससे भी ऊपर सम्पूर्ण विश्व की वेदना की अभिव्यक्ति की है। प्रसाद की निराशावादिता में भी उनका मौलिक चिंतन है। आँसू में वेदना तीन स्तरों पर अभिव्यक्त हुई है। प्रथम स्तर पर कवि स्वयं में वेदना का अनुभव करता है, दूसरे स्तर पर वह वेदनामय हो जाता है और तीसरे स्तर पर वह वेदना दर्शन को प्रकट करता है। अर्थात् उसे सार्वभौमिक रूप दे देता है। भाव की मौलिकता के समान ही इस रचना का कलात्मक शिल्प भी प्रसाद का अपना ही है। आँसू में जिस निराशा की अभिव्यक्ति हुई है वह तत्पुगीन परिस्थिति जनित है। राजनीतिक स्तर पर परतंत्रता और सामाजिक स्तर पर रीतिरिवाजों के बंधन दोनों ही बातें प्रसाद को असहनीय थी और इसी से वे निराश थे। यह सारी निराशा और वेदना प्रसाद के आँसू में झलक रही थी।

“लहर” में दार्शनिकता तो है ही। बौद्धदर्शन से प्रभावित यह काव्य करुणा का पक्ष लेखक है। पराधीनता के कारण अर्थनीति दूषित थी और इसी कारण अग्य बुराइयाँ भी उभर रही थी। समाज अंध विश्वासों में डूबा था। ऐसे में प्रसाद ने अन्तर्मुखी हो लहर की रचना की और उसमें दर्शन का पुट गहरा गया। हर भाव की अभिव्यक्ति प्रतीक या बिम्ब के माध्यम से करते हैं। इसीलिए यह रचना रहस्यवादी है। यहाँ प्रियतम व परमात्मा दोनों ही अर्थ हो सकते हैं। प्रारंभ में प्रसाद ने जो रचना की थी उसमें “लहर” प्रौढ़ काव्य के अन्तर्गत आती है। इस रचना तक आते-आते प्रसाद ने एक दिशा ग्रहण कर ली और उसी ओर सायास बढ़ने लगे। इसकी अंतिम चार कविताएँ लम्बी हैं और सांस्कृ-

तिक पृष्ठभूमि पर रची गई हैं। वे अतीत के गौरव का चित्रण करती हैं। अशोक की चिता में युद्ध की विभीषिका को दूर करने के लिए, करुणा और शांति को उपाय बताया है। साथ ही भारतीय संस्कृति में जो लोच और निष्पक्षता है उसका भी चित्रण किया है। “शेरसिंह का शस्त्र समर्पण” में भारतीयों की वीरता के साथ देशद्रोही का भी चित्रण है जो उस समय घुन के समान देश को नष्ट कर रहे थे। “पेशोला की प्रतिध्वनि” में प्रसाद ऐसे व्यक्ति की तलाश कर रहे हैं जो देश को ऐसे संकट में उबार सके। वर्तमान में अभाव होने के कारण वे अतीत के महाराणा का आह्वान करते हैं पर भील से प्रतिध्वनि ही आती है। कोई और उत्तर नहीं। अंतिम रचना “प्रलय की छाया” में सबकुछ लुट जाने के बाद जो भारत का रूप था उसका साम्य कमला में पाया है जो अब मन ही मन पछता रही है कि पहले उसने सोच समझ कर कदम क्यों नहीं उठाया। हर भारतवासी कमला के समान ही विवशता में जी रहा था और अपने अतीत को याद कर रहा था। इस सम्पूर्ण सांस्कृतिक स्थिति को चित्रित करने के पीछे प्रसाद की यही अभिलाषा थी कि भारतवासी जोश से भर उठें और अंग्रेजों का मुकाबला पूरी शक्ति जुटा कर करें। तभी स्वतंत्रता मिल सकती है। सांस्कृतिक उत्थान होने पर समाज की रूढ़िप्रस्तता भी दूर होगी। “लहर” के कुछ गीतों को पलायनवादी कहा जाता है। ऐसी रचनाएँ कवि उस द्वन्द्वपूर्ण स्थिति में करता है जब भौतिक जगत में संघर्ष के द्वारा भी सफलता न मिलने की आशंका बनी हुई थी। विकास के इस द्वितीय चरण में कल्पना और वास्तविकता, आदर्श तथा यथार्थ और पलायन तथा उद्बोधन का समन्वय हुआ है।

नाटक के गीतों में प्रसाद की राष्ट्रीय चेतना अन्य रचनाओं की अपेक्षा अधिक मुखर है। नाटकों में भारतीय संस्कृति के प्रति गर्व की भावना दृष्टिगत होती है। प्रेम का विषय होने पर भी देश से समझ वह नगण्य ही हो गया है। जाति व धर्म के भी उत्थान की प्रेरणा दी गई है। “सर्वे सुखिनो भवन्ति” की भावना भी नाटकों में प्रचारित की गई है। प्रसाद के नाटकों में जो गीत हैं वे प्रत्यक्ष और परोक्ष दोनों रूपों में राष्ट्र की स्वतंत्रता को पाने की लालसा व्यक्त करते हैं। वे अतीत के रंग में वर्तमान को रंगकर भविष्य की योजना बनाते हैं। प्रारंभ में तो प्रसाद नाटकों में भी नम्र भाव से स्वतंत्रता की बात करते रहे जिसमें सत्य, अहिंसा, करुणा, प्रेम सभी कुछ है पर अंग्रेजी का व्यवहार देखकर वे खिन्न हो गए और क्रांति को उद्बुद्ध करने वाले गीतों की रचना करने लगे। यथा—

प्रशस्य पुण्य पंथ है—बढ़े चलो, बढ़े चलो

अब वे जान की चिता छोड़ आन्दोलन में जुझने की प्रेरणा देते हैं यह सन् 1933 के आसपास की बात है—

पैरों के नीचे जलघर हो, बिजली से उनका खेल चले
कण्टों पर कुछ युसक्याता-सा, ऊपर ऊंचे सब खेल चले

नाटक के पात्र भी देश पर अपने प्राण न्योछावर कर क्रांति की उद्घोषणा करते

हैं। इन्हीं गीतों में एक ऐसा प्रमाण गीत भी है जो स्वयं ही प्रत्येक अंग में एक गति सी प्रचारित करता है यथा—

हिमाद्रि तुंग श्रंग से, प्रबुद्ध शुद्ध भारती
स्वयं प्रभा समुज्ज्वला स्वतंत्रता पुकारती।

पाँचवें अध्याय में कामायनी का ही अध्ययन विस्तृत रूप से तत्कालीन संदर्भ में किया गया है। राष्ट्र के राजनीतिक स्तर पर 1930 से 40 तक जो भी प्रमुख घटना घटी या घटने वाली थी उनकी ध्वनि इस काव्य में भाँकृत होती है। सन् 1930 में नमक सत्याग्रह हुआ फिर 1931 में गाँधी इविन पैक्ट से आन्दोलन रुक गया। सन् 1932 को गाँधी जी को गिरफ्तार कर जल्द ही रिहा कर दिया। सन् 1935 में भारतीय विधेयक पास हुआ। इसके बाद नेहरू जी ने 1936-1937 के आसपास कांग्रेस का नेतृत्व सम्हाला। इस दशक में किसान मजदूर आन्दोलन भी हुए। समाज में सुधार भी हुआ, जिसमें गाँधी द्वारा किया गया अछूताद्वार प्रमुख है। स्त्री के उत्थान का प्रश्न भी उठा। सामाजिक आन्दोलन सभी वर्गों की दूरी कम कर रहे थे। स्त्री के हित में शारदा एक्ट और बाल विवाह निरोधक कानून बना। कामायनी में ये सभी प्रभाव छन कर और परिमाणित होकर आए हैं। इसीलिए उन्हें पहचानने में थोड़ी देर लगती है।

सर्वप्रथम कामायनी का अध्ययन मनोविज्ञान के संदर्भ में किया गया है। यह काव्य प्रतीक रूप में रचा गया है। इसके पात्र मनु, श्रद्धा, व इड़ा क्रमशः मन, हृदय और बुद्धि का अर्थ देते हैं। इसी की भूमिका में प्रसाद ने इस बात के पक्ष में अपना मत भी प्रकट किया है। इच्छा, क्रिया, ज्ञान भी इसी प्रकार प्रतीकात्मक हैं। इसके बाद कामायनी पर मार्क्सवादी प्रभाव का भी विश्लेषण किया गया है जो केवल संकेत रूप से आया है। इस संदर्भ में मुक्तिबोध ने पहल की है। प्रसाद रूसी क्रांति के परिणामस्वरूप भारत में मार्क्सवाद का जो प्रभाव आया था उससे प्रभावित थे, ऐसा मुक्तिबोध का मत है। तभी वे कामायनी में कई स्थलों पर समानता और समानवितरण की बात करते हैं। कामायनी की यह विशेषता है कि जिस भी विचारधारा का व्यक्ति उसे पढ़े उसमें वहीं ढूँढ निकालता है। कारण यही है कि प्रसाद तत्कालीन पृष्ठभूमि पर रचना कर रहे थे और उसमें मार्क्सवाद, गाँधीवाद तथा सामन्तवाद सभी था अतः सब का कामायनी में प्रतिबिम्बन हुआ है पर प्रसाद के नितान्त मौलिक रूप में।

कामायनी के माध्यम से जयशंकर प्रसाद एक ऐसे कल्पित आदर्श मानव का चरित्र उभारते हैं जो उस युग में प्राण्य नहीं था। उस समय जो भी अभाव मानव-चरित्र में थे वे दूर कर मानव के रूप में एक भावी परिकल्पना प्रसाद ने प्रकट की है जिसे सच बनाकर ही मानव सम्पूर्णता को प्राप्त कर सकता है अन्यथा वह प्रसाद के अनुसार उद्विग्न ही रहेगा। वैसे तो प्रसाद ने इस रचना का रूप ऐसा प्रस्तुत किया है कि यह नितान्त व्यक्ति-वादी रचना अनुभव होती है। एक ऐसे नायक का चित्रण जो नितान्त स्वार्थी है और अपने

सुख के लिए कुछ भी कर सकता है पर अंत में आदर्शवादी बन क्षमा याचना कर परम आनन्द का भोग करता है। मनु अपनी बुराई और अच्छाई सभी को प्रकट कर देते हैं वस्तुतः यहाँ मनु समाज में और व्यक्ति में द्वैतता नहीं देखते। वे एक इकाई के समान अपनी और समात की समस्याओं को एक मान कर अनुभव करते हैं और उन्हें हल करने का प्रयास करते हैं।

कामायनी को ऐतिहासिक रूपक तो प्रसाद ने स्वयं ही माना है। शतपथ ब्राह्मण के प्रसिद्ध जलप्लावन की घटना इसका आधार है। इसके चरित्रों का चयन और स्वभाव भी इतिहास के अनुसार ही है। इसकी सभी घटनाएँ पुराने इतिहास में मिल जाती हैं। वस उसकी प्रस्तुति में प्रसाद ने अपना रंगभर कर उसे कामायनी के रूप में प्रस्तुत किया है। कामायनी को दार्शनिकता से अलग नहीं रखा जा सकता। क्योंकि प्रसाद स्वभाव से ही दार्शनिक हैं। इसमें प्रत्यभिज्ञा दर्शन पर आधारित आनन्दवाद का प्रतिपादन हुआ है। इस दर्शन के प्रभाव से रचना में समरसता अद्वैतवाद स्वरूपज्ञान, महाचेतना तथा व्यापक आनन्द की भावना आ गई है। प्रसाद हर घटना का संदर्भ दर्शन से जोड़ देते हैं। छोटी सी बात को भी वे महाचेतना तक पहुँचा देते हैं। इच्छा, क्रिया व ज्ञान का समन्वय कर आनन्द की स्थिति तक पहुँचा जा सकता है ऐसा वे कामायनी के माध्यम से प्रतिपादित करते हैं।

इन सब प्रभावों को समोए हुए भी कामायनी अपने युगीन संदर्भ को नहीं छोड़ती। सच तो यह है कि इन सबका गहन रूप ही प्रसाद ने कामायनी में प्रस्तुत किया है। इसमें मनु के रूप में तत्कालीन भारतीय युवक की मनस्थिति ही व्यक्त हुई है जो विशुद्ध का और एक नई समाज-रचना के लिए व्याकुल भी। ऐसे में प्रसाद मनु और भारतवासी दोनों को लक्ष्य कर कहते हैं—

शक्ति के विधुत्कण कण जो आस,
विकल विखरे हो निरुपाय
समन्वय उनका करो समस्त,
विजयिनी मानवता बन जाए।

मानवता की भावना भारतीय संस्कृति में प्रारंभ से ही रही है। प्रसाद उस सत्य को नए परिवेश में व्यक्त करते हैं।

छठे अध्याय में जयशंकर प्रसाद के काव्य की भाषा पर विचार किया गया है। खड़ी बोली के विकास में प्रसाद का योगदान अविस्मरणीय है। हिन्दी का विकास आदि-काल से ही बीज रूप में प्रारंभ हो गया था पर स्पष्ट दिखना मारतेन्दु युग से ही प्रारंभ हुआ। हिन्दी भाषा का विस्तार स्वाधीनता आन्दोलन के साथ-साथ हुआ। तब हिन्दी हिन्दू हिन्दुस्तान को स्वदेशी की पहचान मान लिया गया था। राजनीतिक स्तर पर गाँधी जी ने भी अन्य प्रान्तीय भाषाओं के स्थान पर हिन्दुस्तानी को ही सबका माध्यम माना जो प्रकारांतर से हिन्दी ही है। मध्यवर्ग के प्रयोग से इस भाषा में संस्कृत के तत्सम शब्द बढ़ गए और भाषा थोड़ी दुर्बोध हो गई। पर अपने लचीलेपन के कारण रूप बदलती

रही और अब तक प्रचलित है। प्रसाद ने प्रयोग करते समय सम्पूर्ण काव्यात्मक पदावली को प्रसादीय भाषा बनाकर ही प्रस्तुत किया जो सबसे अलग और मौलिक लगती है। प्रसाद भाषा को कलात्मक रूप में प्रस्तुत करते हैं जो युग के दबाव के कारण और स्वच्छंदतावाद का मुख्य गुण होने के कारण उचित ही है। वे प्रतीक रूप में अपनी कल्पना को अभिव्यक्त करते हैं। उनके प्रतीकों का स्वरूप युग विशेष की आवश्यकताओं के अनुसार है। उन्होंने जीवन और जगत के हर क्षेत्र से प्रतीकों का समायोजन किया है जिनमें प्रकृति व इतिहास से ग्रहीत प्रतीक अधिक है। इसमें भारतीय संस्कृति से लेकर तत्कालीन आन्दोलन तक के संकेत छिपे हुए हैं। प्रसाद के प्रतीक मूल रूप में सांस्कृतिक हैं और कहीं-कहीं रहस्यात्मक या दार्शनिक भी।

प्रसाद की बिम्ब योजना बहुत मनोहारी और प्रभावकारी है। समाज व राजनीति प्रभाव कवि को संवेदित करते हैं और उनकी अभिव्यक्ति प्रसाद बिम्ब के रूप में करते हैं। अपने ऐन्द्रिक अनुभवों को वे प्रायः बिम्वात्मक रूप में व्यक्त करते हैं। चाक्षुष, श्रव्य, स्पर्श, घ्राण तथा स्वाद्य के अतिरिक्त सूक्ष्मेन्द्रीय मन द्वारा प्रेरित बिम्ब भी इनके काव्य में प्राण्य हैं। प्रसाद साहित्य में बिम्बों का विकास तीन चरण में होता है। प्रारंभ में परंपरा से प्रभावित सामान्य प्रकार के बिम्ब उनकी रचनाओं में आए हैं यथा चित्राधार से लेकर प्रेमपथिक तक के बिम्ब/विकास के दूसरे चरण में सरल न प्रौढ़ बिम्बों का समन्वय है जो आँसू लहर और भरना में संकलित हैं। इस स्तर के बिम्ब प्रसाद की विकासशील प्रतिभा का परिचय देते हैं। पहले की रचनाओं की अपेक्षा वे थोड़े जटिल अवश्य हो जाते हैं। तृतीय चरण में बिम्ब जटिल होकर प्रतीक की ओर उन्मुख होने लगते हैं। कामायनी में ऐसे ही बिम्बों का संयोजन हुआ है जिनमें उद्बोधनता, तीव्रगी और अनौचित्य के साथ-साथ व्यंजकता का भी गुण है। कामायनी उनकी प्रौढ़तम रचना है अतः उसमें हर स्तर पर श्रेष्ठता और उच्चता का ही गठन किया गया है। बिम्ब में प्रतीकात्मकता होने का अर्थ उसकी श्रेष्ठता बढ़ जाना है क्योंकि यह गुण आने पर बिम्ब में व्यंजकता बढ़ जाती है और वे स्वाद्वंद हो जाते हैं। इस बिम्ब योजना के माध्यम से प्रसाद लक्षणा और व्यंजनी शक्ति का सहारा ले उस काल की वास्तविक स्थिति का चित्रण करते हैं इस प्रकार प्रसाद की भाषा प्रतीक और बिम्बों के माध्यम से ब्रिटिश सरकार पर वार कर रही थी चाहे परोक्ष रूप में सही। प्रसाद के बिम्बों और प्रतीकों को सामाजिक संदर्भ में देखने की चेष्टा वहाँ पहली बार की गई है। अध्ययन का प्रयोजन यहीं था जिसकी यथासंभव पूर्ति प्रस्तुत शोध प्रबन्ध में की गई है।

Impact of Film on Urdu Poetry

Waris Ahmad Khan

Sup. Prof. Mohammad Hasan

زیر نظر مقالہ میں فلم کی تاریخ، اس کی اہمیت اور فلم کی تکنیک کے اردو شاعری پر اثرات کا تجزیہ کر کے اسے قلم بند کیا گیا ہے۔ اس مقالہ میں فلم کی تاریخ کو چار حصوں میں بانٹ کر اس کے ہر حصے کی خصوصیات پر روشنی ڈالی گئی ہے۔ اور یہ دیکھنے کی کوشش کی گئی ہے کہ فلم پہلے دوسرے لے کر چوتھے دور تک کس کس مرحلے سے گزر کر اپنی ارتقائی منزل تک پہنچی۔ اس میں کون کون سے تجربات ہوئے، کون کون سی نئی تکنیک اور نئی باتیں شامل کی گئیں۔ بغیر بولتی فلموں کا آغاز کیسے ہوا اور کون سے اس کے محرکات تھے اور اس کے بعد بولتی فلموں کا دور اس طرح شروع ہوا اور اس کے محرکات کیا تھے۔ فلم کے ارتقا کا تجزیہ سماجی محرکات کی روشنی میں کیا گیا ہے۔ اس مقالہ میں یہ بھی دیکھنے کی کوشش کی گئی ہے کہ مغرب میں فلم کی ایجاد کے کتنے دنوں کے بعد ہندوستان میں اس کی پیدائش کا وجود ہوا۔ یہاں فلم رواج کیسے پوسکا اور مغرب کے فلم کاروں نے ہندوستان میں فلم کی بنیاد ڈالنے اور اس کو ترقی دینے میں کیا رول ادا کیا۔ اس مقالہ میں یہ بھی دیکھنے کی کوشش کی گئی ہے کہ ہندوستان میں فلم کے وجود کے بعد یہاں کے فلم کاروں نے فلم کو ترقی دینے میں کس طرح کی کوششیں کیں۔ اور کون کونسی نئی چیزیں ہندوستانی فلم میں شامل کیں۔

”موشن فلم کیا ہے“ عنوان کے تحت موشن فلم کی کیا اہمیت ہے اور اس کے ذریعے کی گئی ترقی کیسے کیا گیا ہے۔ اور یہ دیکھنے کی کوشش کی گئی ہے کہ فلم کی زبان حرکت کرتی ہوئی تصویروں کی وجہ سے کس طرح آفاق بن گئی ہے۔ فلم میں

صرف مکالمہ ہی نہیں ہوتا ہے بلکہ اس کے ترسیدلے حمل میں مرسد کا لب و لہجہ ، اس کے جسم کے حرکات و سکنات اور اس کے چہرے کے اترا چڑھاؤ بھی اہم رول ادا کرتے ہیں ۔ اور بہت سے ان کی باتیں کہ جانتے ہیں ۔ فلم میں ہلکے جھپکتے ہی فلم بین ایک جگہ سے بالکل دوسری جگہ پہنچ جاتا ہے ۔ یہ تمام چیزیں ہیں جنہوں نے فلم کے ارتقا میں مدد کی ہے ۔

" فلم کے اثرات " عنوان کے تحت فلم میڈیا کے انسانی ذہن پر کیا اثرات پڑتے ہیں اس پر روشنی ڈالی گئی ہے ۔ فلم کا میڈیا حرکتی تصویروں کی وجہ کر اتنا مضبوط ہو گیا ہے کہ یہ انسانی ذہن پر بہت آسانی سے اثر پذیر ہو جاتا ہے ۔ فلم کا میڈیا انسانی ذہن اور انسانی سوچ کو بدلنے میں اہم رول ادا کرتا ہے ۔ فلم کار اگر باصلاحیت ہوتو اس کے بنائی فلم ایسی پوستکش ہے کہ وہ اس فلم کے ذریعے عوام کا ذہن اس طرح کا بنادے جس طرح کا وہ چاہتا ہے ۔ بعض یہ فلم ساز کی صلاحیت پر منحصر ہے ۔ لیکن اگر عام طور پر دیکھ اُجھائے تو ہمیں یہ پتہ چلے گا کہ فلم چاہے جیسی بھی ہو انسانی ذہن کو متاثر ضرور کرتی ہے ۔ یہ اثرات مثبت بھی ہو سکتے ہیں اور منفی بھی ۔ بعض اس کے ذریعے سماج کو بگاڑا بھی جاسکتا ہے اور بنایا بھی جاسکتا ہے ۔ گویا کہ فلم چاہے جیسی ہو عوام کے ذہن پر بھر پور اثر ڈالتی ہے ۔ یہیں وہ نقطہ ہے جہاں کو اس مقالہ میں قلم بند کرنے کی کوشش کی گئی ہے ۔

" فلم کی ضرورت اور فلم اور عوام کا رشتہ " عنوان کے تحت یہ دیکھنے کی کوشش کی گئی ہے کہ فلم کاروں نے عوام کے مسائل سے اپنے کو جوڑ کر اور ان مسائل کو اپنی فلموں میں پیش کرکے کس طرح عوام سے ایک رشتہ جوڑا لیا ہے ۔ فلم بین جب ایک فلم میں اپنے مسئلے اپنے دکھ اور اپنے درد کی داستان کو دیکھتا ہے تو اسے اس فلم کے فلم کار کے ساتھ ایک رشتہ کا سا احساس ہونے لگتا ہے ۔

" فلم کی تاریخ " عنوان کے تحت فلم کا اس وقت سے جائزہ لیا گیا ہے جب

مختصر تصویروں کو متحرک بنانے کا ایک آلہ تیار کیا گیا تھا - پھر دھیرے دھیرے یہ آلہ اپنی شکلیں

بدلتا رہا اور بعد میں جا کر مکمل مووی کیمرے کی شکل اختیار کر لی - لیکن فلم اپنی اصل شکل

میں بہت تجربوں کے بعد پہنچ پائی - پہلے یہ پوتا تھا کہ ایک چرخ پر بہت سی تصاویر

چسپاں کر دی جاتی تھیں اور جب اسے گھمایا جاتا تھا تو وہ تصویریں حرکت کرتی پڑتی نظر آتی

تھیں - پھر اسٹیریو اسکوپ کا استعمال ہوا اور اس کے بعد آٹو میٹک کیمرہ اور پھر موو کیمرے

و وغیرہ کا استعمال ہوا اور فلم اپنی ارتقائی منزل کی طرف بڑھتی گئی -

فلم کی شرائط مغرب میں پڑتی تھیں چنانچہ اب " مغرب میں فلم کا ابتدائی دور "

عنوان کے تحت وہاں فلم کا آغاز کیا ہوا ، کس طرح ہوا اور ایک کے بعد دوسری فلمیں کیسے کیسے

ترقی کرتی گئیں اور کون کون سے سدھار ان میں پڑے - اس کا جائزہ لیا گیا ہے - اس کے بعد

ہندوستان میں فلم کے چار دور پہلا دور ، دوسرا دور ، تیسرا دور اور چوتھے دور میں فلم

کس کس مرحلے میں رہی اور ایک دور کے بعد دوسرے دور اور پھر تیسرے اور چوتھے دور میں

اس میں کس قسم کی تبدیلیاں اور بہترین آئی اس کی تحقیق کی گئی ہے - پہلے دور میں فلم اپنے

بالکل ابتدائی شکل میں تھی یعنی اس دور میں مختصر مختصر سی فلمیں جن میں پلاٹ وغیرہ

نہیں پڑتا تھا بنتی تھیں - اس دور کی فلموں میں بس بندر کا ناچ یا کوئی تماشہ دکھایا جاتا

تھا - اس دور میں فلم تکنیک کے اعتبار سے بہت پیچھے تھیں - شارٹس بہت ہی سہلے پڑتے

پڑتے تھے اور لاکھ و غیر کا انتظام بھی نہیں تھا -

فلم اپنے دوسرے دور میں کم از کم اتنی ترقی ضرور کر چکی تھی کہ اس دور میں

دادا صاحب پہاڑی کے کی پہلی فیچر فلم " راجہ پریش چندر " لوگوں کو دیکھنے کو ملی اور اس کے بعد یہ رکنی فیچر و لمیں بنیں۔ اس دور میں ترک فوٹو گرافی کا استعمال ہوا۔ اسٹوڈیوں اور سیٹ کا تصور قائم ہوا اور آؤٹ ڈور کی شوٹنگ کی شروعات ہوئی۔ اس دور میں روشنی کا انتظام بھی ہو گیا تھا۔ اس دور کی فلموں میں کوئی نہ کوئی کہانی ضرور ہوتی تھی۔ رقص اور موسیقی کا رواج بھی فلموں میں اس دور میں شروع ہوا۔ اس دور کی فلموں میں شیر اور دوسرے زندہ جانوروں کا استعمال بھی کیا گیا۔

فلم کے تیسرے دور میں پہلی بولت فلم عالم آرا بنی تھی جو فلم کے لئے ایک بڑی ترقی تھی۔ حالانکہ اس فلم میں سوائے اچھل کود کے اور کچھ نہ تھا۔ لیکن یہ بات کم نہ تھی کہ ایکٹر اور ایکٹرس آپس میں باتیں کرتے ہوئے دکھائی دیتے تھے۔ اس دور میں لمبی فلموں کے بننے کا رواج شروع ہوا۔ کلوز اپ کا استعمال اس دور کی فلموں میں خوب ہوا جس سے فلم میں نئی جان آئی۔ اندرونی احساسات کا اظہار چہرے کے تاثرات سے ہونے لگا۔ اس دور میں اچھی اور مہاری کہانیوں پر فلمیں بننے شروع ہوئیں۔ جس میں عوام کے اہم مسائل پہنچ گئے۔ مکالمے، ایکشن اور تصادم کو اس دور کی فلم میں اہم جگہ ملی۔

اپنے چوتھے دور میں فلم اپنے ارتقائی منزل تک پہنچ چکی تھی۔ اچھی موضوعاتی اور با مقصد فلمیں اس دور میں بن رہی تھیں۔ اسی دور میں نیکی کلر فلموں کا رواج شروع ہوا۔ اسکوپ پروسس اینڈ کلر کی تکنیک میں فلم بنانے کا رواج بھی اسی دور میں شروع ہوا۔ ہونٹاز کا استعمال اس دور میں خوب ہوا۔ رقص، موسیقی اور مکالمے میں بہت زیادہ بہتری آئی اور سیٹ بھی بہت خوبصورت ہو گئے۔ گویا فلم اپنے آغاز سے لے کر اپنی ارتقائی منزل تک کن کن مرحلوں سے جا گزر کر پہنچی اور کیسی کیسی اس میں تبدیلیاں آئیں اس کا جائزہ تفصیل سے لیا گیا ہے۔

"فلم کے سیاسی اور سماجی محرکات" عنوان کے تحت یہ دیکھنے کی کوشش کی گئی ہے کہ وہ کون سے محرکات تھے جنہوں نے فلم کے آغاز اور اس کی ترقی میں مدد کی۔ اسٹیج ٹاؤن فلم کی ترقی میں بہت رہا ہے۔ فلم سازی کے میدان میں وہی لوگ آئے تھے جو پہلے اسٹیج سے بھی متعلق تھے۔ (ان میں سے بیشتر اسٹیج کہانیوں کے مالک تھے) اس لیے اسٹیج کے ہی مسائل کو انہوں نے فلم میں پیش کرنا شروع کر دیا تھا۔ اس کے علاوہ کاروباری لوگوں نے اسے جب پیشے کے طور پر اختیار کیا تو خوب پیسے اس میں لگائے جس سے اچھے اور خوبصورت فلمیں بننے لگیں۔ اور خوبصورت اسٹوڈیوز بھی وجود میں آئے۔ اپد بات یہ بھی تھی کہ فلم تفریح کا سب سے سستا ذریعہ تھی لہذا صنعت ترقی کے پیش نظر جب مزدور قوم کاؤں چھوڑ کر شہر آئی تو اسے سستی تفریح کا صرف ایک ہی ذریعہ نظر آیا اور وہ تھی فلم۔ چنانچہ ان لوگوں نے خوب فلمیں دیکھنی شروع کیں۔ اس سے فلم کاروں کی ہمت افزائی ہوئی اور کمائی میں اضافہ ہوا تو وہ لوگ فلم میں اور زیادہ پیسہ لگانے لگے۔ ملک کے بھارے کے بعد ہندوستان کی طاعنی حالت اثر انداز ہوئی تھی اس لیے اسے بھی کسی ایسے ذریعہ کی تلاش تھی جس سے اس کی آمدنی ہو چنانچہ اس نے بھی فلم کی طرف توجہ کی۔ کیونکہ فلم انڈسٹری کے ترقی کرنے کی صورت میں اسے زیادہ سے زیادہ ٹیکس ملنے کے امکانات تھے۔ اس کے علاوہ حکومت نے فلموں کے ذریعے خود بھی کاروبار شروع کیا اور اس کے پیش نظر فلم ڈویژن کا قیام ہوا اور پھر اس کے بعد فلم آرکائیو، فلم فائننس کارپوریشن اور انڈین موشن پکچر ایکسپورٹ کارپوریشن قائم ہوا۔ اس سے فلم سازوں کو بہت سی سہولتیں ملنے لگیں۔ فلم کارپوریشن کے مالی تعاون نے فلم سازوں

"ہندوستانی فلموں پر مغربی فلموں کے اثرات" عنوان کے تحت مغربی فلموں کے ہندوستانی فلموں پر جو اثرات پڑے ان کا جائزہ لیا گیا ہے اور یہ دیکھنے کی کوشش کی گئی ہے کہ ہندوستانی فلم نے مغربی فلم سے کس طرح کے اثرات قبول کیے ہیں - یہ جائزہ موضوع اور تکنیک دونوں کی روشنی میں لیا گیا ہے -

"فلم اور ادب" عنوان کے تحت فلم اور ادب کا تقابلی تجزیہ کرتے ہوئے دونوں کی اپنی اپنی اہمیتوں پر روشنی ڈالی گئی ہے -

"فلم کی تکنیک" عنوان کے تحت فلم کی تمام تکنیکوں کا تفصیل سے جائزہ لیا گیا ہے - جس میں فریم ، شاٹ ، ایکسٹریم کلوز اپ ، کلوز اپ ، کلوز شاٹ ، میڈیم شاٹ ، لانگ میڈیم شاٹ ، لانگ شاٹ ، ایکسٹریم لانگ شاٹ ، مونتاز ، ایچ ، کٹ ، ڈی زولو اور فیڈ آؤٹ شامل ہیں - اس کے بعد مقالہ کا اصل موضوع شروع ہوتا ہے یعنی "فلم کا اثر اردو شاعری پر" -

اب عنوان کے تحت فلم اور فلم کی تکنیک کے جو اثرات اردو شاعری پر پڑے ہیں اس کا جائزہ لیا گیا ہے - فلم تصاویر کا ایک سلسلہ ہے اور مختلف اور متنوع پیکچر فریم سے مل کر ایک وحدت کی تعمیر کرتا ہے - کہانی کا مقصد انہیں بکھیرے ہوئے شاٹ کے ذریعے ظاہر ہوتا ہے - فلم تصاویر کا حرکت سلسلہ ہے یعنی فلم کی تصاویر میں حرکت اور عمل مرکزی حیثیت رکھتے ہیں - اس میں باتیں الگ الگ شاٹ میں کہی جاتی ہیں - اس میں مکالمے ہوتے ہیں ، سیچویشن ہوتے ہیں ، عمل ہوتا ہے ، حسیاتی تصویریں ہوتی ہیں ، مونتاز ہوتا ہے ، فلیش بیک ہوتا ہے اور خود کلامی کا انداز ہوتا ہے - یہ تمام تکنیکیں وہ ہیں جو فلم کے وجود کے بعد اردو شاعروں خاص طور پر فلم سے متعلق شاعروں کی شاعری میں نظر آتی ہیں - ان تکنیکوں کے استعمال سے ادب کا لہجہ ، طریق کار اور اسلوب متاثر ہوا - اس کے علاوہ حسیاتی اور نفسیاتی کیفیات فلم پر غالب رہتی ہیں -

اور ادب میں یہ اثرات بھی بڑی حد فلم ہی کے مرہون بنتے ہیں۔ فلم میں پس منظر اور پیش منظر کا جو رشتہ ہے اس نے بھی ادب کو متاثر کیا ہے۔ ناؤں اور انسانے میں ہی نہیں شاعری میں بھی اس کا اظہار مختلف نظموں میں ہوا ہے۔

فلم کے اثرات تو فلم سے متعلق آقا حشر کاشمیری، حضرت آرزو لکھنوی اور شکیل بدایونی

کے علاوہ ان شاعروں کے کلام پر بھی بڑے ہیں جن کا تعلق فلم سے نہیں رہا ہے لیکن اس تحقیقی مقالہ میں فلم سے متعلق ان شاعروں کے کلام کا تجزیہ کیا گیا ہے جن کے کلام پر فلم کے اثرات نمایاں طور پر نظر آتے ہیں۔ یہ لوگ ہیں۔ ساجد لدھیانوی، احترا لایمان، راہی مصوم رضا، کھٹی اعظمی، مجروح سلطانپوری، جا، نثار اختر، علی سردار جعفری، سلام مچلی شہری اور ندا قاضی۔

شاعری میں فلم کی تکنیک کے استعمال سے شاعری کوئی کون سا رنڈ پیدا ہوا ہے اور

کس نئے ذائقہ سے اردو شاعری روشناس ہوئی ہے اس کا جائزہ اس مقالے میں لیا گیا ہے۔ شاعری زندگی کی طرح اپنا ایسا سلسلہ ہے جسے عروج اور زوال دونوں سے سابقہ پڑتا ہے۔ ہر عہد میں شاعری اپنا ایک خاص اسلوب اپنی خاص اسٹائل لے کر سامنے آتی ہے۔ فلم کے وجود میں آنے کے بعد فلم کی تکنیک کے اثر سے بھی شاعری کو ایک خاص شکست ملی۔ پہلے شاعری میں وہ باتیں جو صرف بیان سے ظاہر کی جاتی تھیں لفظی تصویروں کے ذریعے پیش کی جانے لگیں اور ہر بات الٹ الٹاٹات میں کہی جانے لگی۔ نظموں اور غزلوں میں کرداروں کو سرگرم میل دکھایا گیا۔ جگہ جگہ اردو شاعری میں ہونے والا استعمال کیا گیا۔ اس کے علاوہ شاعری میں فلموں کے انداز کے مکالمے بھی پیش کیے گئے جیسے اید کردار دوسرے کردار سے مخاطب ہو کر "اچھ، کہہ پاؤ اور دوتوں میں کسی نقطے یا کسی مسئلے پر بحث پوری ہو۔ اردو شاعری میں جگہ

حکہ فلم کے طرز کی سچویشن تیار کی گئی تھی۔ قارئین ہر ایک خاص قسم کی کیفیت طاری ہونے لگی اور اس میں اہل بالک نندہ انداز کا مزہ ملنے لگا۔ ملیش بیل کی تصویروں کو بھی چلتے پھرتے ہونے انداز میں دکھایا گیا۔ غرض کہ شاعری میں کہانی کے عناصر شامل کر کے اور اس میں فلم کی تکنیک کا استعمال کر کے اس میں بہرہ پور درامائیت پیدا کرنے کی کوشش کی گئی اور نظموں اور غزلوں کو اس انداز سے لکھا گیا کہ ہر چیز چلتی پھرتی شکل میں نظر آنے لگی۔ اور وہ چیزیں قاری اپنی آنکھوں سے اپنی اصل شکل میں دیکھنے لگا جو شاعر اسے دکھانا چاہتا ہے۔

اردو شاعری پر فلم کے اثرات کا مطلب یہ ہرگز نہیں ہے کہ شاعری نے فلم کی سطحیت کا اثر لیا ہے۔ اردو شاعری نے فلم کی انہی چیزوں کے اثرات قبول کیے ہیں جو فلم کی خوب سمجھی جاتی ہے اور جس نے شاعری کو پزیرا اور خوش رنگ بنانے میں مدد دی ہے۔

فلم کی تکنیک کا خوبصورت اور بہرہ پور استعمال کرنا۔ مع مضمون میں اگر دیکھا جائے تو ساحر لدھیانوی نے شروع کیا تھا۔ اس کے بعد پھر بہت سے شاعروں نے اپنے کلام کو خوبصورت بنانے کے لئے ان تکنیکوں کا استعمال کیا۔ ساحر لدھیانوی نے اردو شاعری کو درامائیت کے اصول جوہر سے نوازا اور ایسے ایسے شعر کہے جس کو پڑھ کر پوری کہانی کو چلتی پھرتی ہوتی تصویروں میں دیکھنے کا لطف ملا۔ اور پھر اس کے بعد دوسرے شعرا نے بھی اس انداز کو اپنالیا۔

انہی میں خوبصورت امیجوں اپنی شاعری میں پیش کی۔

زیر نظر مقالہ میں ساحر لدھیانوی اور دوسرے شعرا کے کلام کا لفظی تصویروں اور امیجوں کی روشنی میں تجزیہ کیا گیا ہے۔ انکی ادبی قدر و قیمت پر کوشش بحث نہیں کی گئی ہے بلکہ یہ پرکھنے کی کوشش کی گئی ہے کہ ان شاعروں کے یہاں فلم کی کون کون سی تکنیک استعمال کی گئی ہے اور کس شاعر نے کس تکنیک کو کس انداز میں استعمال کیا ہے۔ اور اس تکنیک کے استعمال

ان کی شاعری میں کون سا رنگ پیدا ہوا - یقیناً طور پر ان تکنیکوں کے استعمال نے ان شعرا
 کے کلام میں ایک خاص ذائقہ پیدا کیا ہے جو قارئین کو ایک نیا مزہ دے جاتا ہے - قارئین ان کلام کو
 بڑھ کر صبر سے سننا اور سمجھنا ہی نہیں ہے بلکہ وہ اسے چلتی پھرتی پوش شکلوں میں سے دیکھنا
 ہے اور وہ ان کلام اس طرح سے لکھو جاتا ہے جس طرح سے وہ قلم کے پردہ پر کھوتا رہا ہے - جسے ان
 بد شاعروں کی ادبیات کا سواں ہے وہ ان چیزوں کے استعمال سے کہیں پر سے مخرج نہیں ہوئے -
 اور ایسی صورت میں جب کہ شاعروں کی ادبیات اپنی جگہ پر قائم ہو اور اس کے علاوہ شاعروں میں چلتیں
 سے پیدا کرنے لگی ہوں تو ظاہر ہے وہ شاعروں پہلے کی شاعری کے مقابلے میں زیادہ خوبصورت
 زیادہ پُر اثر ہوگی - اور یہی ہوا یہ شاعر یقیناً طور پر پہلے کی شاعری سے زیادہ حسین ہے اور
 قارئین کے دہریں پر اثر دالئے اس نے انہیں کو صاف کرنے اور اس کے اندر کوئی انقلاب تبدیل لانے
 کے لئے زیادہ کارگر زیادہ مفید ہے - یہی وہ خلاصہ ہے جو اس مقالہ میں ان شاعروں کے کلام کا
 فلسفہ مقالہ نظر سے تجزیہ کرنے کے بعد سامنے آیا ہے -

Development of Urdu in Orissa

Md. Hanifullah Newalpurī

Sup : Prof. Mohammad Hasan

اُڑیہ میں اردو زبان کا آغاز چار صدیوں سے کچھ عرصہ قبل یعنی ۱۵۱۰ء کے اطراف میں بنگال کے حکمران حسین شاہ کے سپہ سالار اسماعیل غازی کے اُڑیہ پر حملہ سے ہوتا ہے۔ اس کے بعد متواتر افغان اور فوجی مغل فوجی اور صفویائے کرام کا اُڑیہ میں ورود ہوتا رہا۔ اُڑیہ میں جو مسلمان آئے وہ ترک، مغل، افغانی، تاتاری قوم اور قبیلوں سے بالواسطہ متعلق تھے اور ان کی مشترکہ تہذیبی زبان فارسی تھی۔ فارسی یہاں سہکاری اور دفتری زبان کی حیثیت اختیار کی اور مرور ایام کے ساتھ مقامی زبان اُڑیا کو خاشا کر گئی رہی۔ جو لوگ فاتحوں کے ساتھ باہر سے اُڑیہ آئے ان میں سے اکثر نے اسے اپنا وطن بنالیا اس لئے سنی اور تہذیبی سمجھوتا عمل میں آیا۔ فارسی اگرچہ سہکاری اور دفتری زبان تھی لیکن یہاں اردو ہی ایک ایسی زبان تھی جو فریقین کے درمیان رابطہ کی زبان بنی اور رفتہ رفتہ قومی تہذیب کی ترجمان بھی!

۱۵۹۲ء میں مغلوں نے شمالی اُڑیہ پر قبضہ کر لیا اور اسی دورانِ دکن کی جانب سے گولکنڈہ کے سلطان نے جنوبی اُڑیہ میں "چلیکا" کے کنارے تک اپنا قبضہ کر لیا۔ یہ یک وقت شمال اور جنوب کی جانب سے دو مختلف سیاسی اقتدار کی توسیع نے اُڑیہ میں اردو زبان کے ارتقا میں خاصہ اہم رول ادا کیا۔ اُڑیہ کے بندوں میں بھی اردو اور فارسی مقبول ہوئیں جس کی بنا پر فقیر مہن سینا پتی اور دھاناکھرائے جیسے نامور اُڑیا ادیبوں نے اپنی تخلیقات میں اردو الفاظ انتہائی بے لطفی کے ساتھ استعمال کئے ہیں۔

بعد میں تو اردو فارسی الفاظ اڑیا زبان کا ایک حصہ بن گئے اور آج اڑیا زبان میں جو ہزار سے زائد اردو فارسی اور عربی الفاظ نے اپنا مستقل مقام بنالیا ہے۔ ان کے علاوہ کچھ کچھ اڑیسہ کی علاقوں اور کچھ جگہوں میں جو محو استغناء اور قبائلی وغیرہ اڑیا زبان میں لکھے ہیں ان پر بھی اردو فارسی کے اثرات حاوی ہیں۔ سب سے بڑی بات تو یہ ہے کہ اڑیا رسم الخط میں کرنی طرز تحریر (۳۱۱-۳۹۹۸) بھی فارسی کے خط شکستہ کے زیر اثر وجود میں آئی۔ کرنی طرز تحریر کا نمونہ منشی شیخ رحمان اللہ مرحوم کے تحقیقی مقالہ میں منسک خط (۴۵) سے ملتا ہے۔

اٹھارہویں صدی کے آخر میں جب شجاع الدین محمد خاں اڑیسہ کا صوبہ دار تھا، اڑیسہ میں سستیہ پیر کی یوجا کا آغاز ہوا۔ یہ یوجا ہندو مسلم اتحاد اور قومی یک جہتی کے نظریہ سے فروغ پذیر ہوئی۔ اس ضمن میں بہت سی ادبی تخلیقات بھی وجود میں آئی جیسے اڑیسہ میں "پالا" کہا جاتا ہے۔ مغل اور افغان کلچر اور اردو زبان کا اڑیسہ کے ہندو کلچر پر جو گہرا اثر پڑا اسکی زندہ مثال اڑیا زبان کے "پالا" یا "جائرا" میں نظر آتی ہے۔ دراصل سستیہ پیر کی یوجا کا سلسلہ ایک قطعی غیر فرقہ وارانہ دینی رسم اور ہندو مسلم اتحاد کی علامت تھا۔ اڑیسہ کی رسم و رواج، وضع قطع، خورد و نوش اور طرز مصالحت و معیشت کی بات کی جائے تو قدم قدم پر اردو کے اثرات پھیلے ہوئے ملتے ہیں۔

۷۵۷

مغلیہ دور حکومت میں شہر کنگ کو خاصی اہمیت حاصل تھی۔ یہی اڑیسہ کا دارالسلطنت تھا۔ بیرجی علاؤ فضلہ مسلسل یہاں آتے رہے۔ اڑیسہ کے مختلف علاقوں میں صوفیائے کرام کی خانقاہیں قائم ہوئیں۔ جہاں ایک طرف دہلی پنجاب، اتر پردیش، بہار اور بنگال سے سیاری اردو زبان برادر راستہ یہاں

پہنچی وہیں آندھرا کی طرف سے دکنی اردو بکھڑا ہوا آئی۔ اڑیسہ کے جنوبی علاقوں میں لہجام اور کوراپٹ ضلعوں میں اب بھی دکنی اردو رائج ہے لیکن ٹنک اور دیگر شہری اضلاع میں جو اردو بولی جاتی ہے وہ معیاری اردو اور دکنی اردو کے امتزاج سے وجود میں آئی ہے۔ لیکن رفتہ رفتہ دکنی اثرات معیاری اردو کے اثرات کے تحت دب کر رہ گئے۔

پیش نظر مقالہ کے باب اول میں اڑیسہ میں اردو زبان کی نشوونما کی مختصر صورت حال کا تفصیلی جائزہ لیا گیا ہے اور ساتھ ساتھ اردو زبان کے اصل سرچشموں یعنی صوفیائے کرام کی تبلیغ، استقامت کے تحت اردو کا فروغ، اڑیسہ کے تعلیمی اداروں کے رول کا تفصیل سے جائزہ لیا گیا ہے۔ دورِ قدیم سے ہی اڑیسہ ایک دور افتادہ سیاسی سماجی اور معاشی اعتبار سے زبوں حال صوبہ سمجھا جاتا رہا ہے۔ انگریزوں کی حکومت نے یہاں باقاعدہ تعلیم کا کوئی رواج نہیں تھا۔ عام طور پر اعلیٰ خاندان کے لوگ کسی قدر تعلیم حاصل کرتے تھے مگر وہ بھی مذہبیات تک محدود رہتی تھی۔ اس طرح تعلیم کا دائرہ محدود تھا۔ افغانوں اور مغلوں کے زمانوں میں کب معاش کے لئے لوگوں نے فارسی پڑھی اور اہل ثروت لوگ خانگی طور پر اتالیقوں سے لے کر پٹنوں کو تعلیم دلاتے تھے۔ ۱۸۰۳ء میں انگریزوں کی آمد کے بعد اڑیسہ میں سیاسی اور سماجی حالات بدلنے لگے۔ سب سے پہلے ایٹ انڈیا کمپنی نے ۱۸۲۲-۲۳ء میں مدراس پرنسپلٹری میں تعلیمی اقدامات کئے۔

۱۸۳۶ء تک اڑیسہ میں تعلیم کی توسیع خاص طور پر قابل ذکر نہ تھی لیکن ۱۸۳۹ء کے بعد یہاں کی تعلیمی صورت حال میں خاصی تبدیلی واقع ہوئی جب سر ہنری پوٹنر شعبہ تعلیم کے سربراہ ہو کر آئے تو انہوں نے تعلیمی اداروں کی ترقی پر کافی توجہ دی۔ ۱۸۵۶ء میں برہم پور ضلع اسکول قائم ہوا۔ ۱۸۶۱ء میں اڑیا زبان کو اصطلاحی زبان

کے طور پر حکومت نے تعلیم کر لیا۔ اس کا سب سے بڑا فائدہ یہ ہوا کہ مقامی لوگ
جواب تک اپنی مادری زبان میں سرکاری امتحانات دے نہیں پاتے تھے اب انہیں یہ

راعات حاصل ہوئیں۔ ۱۸۶۶ء کے قحط کا تعلیمی صورت حال پر بھی خاصہ اثر پڑا۔ مشنریوں
نے افلاس زدہ اور پریشان حال بچوں کو پناہ دی اور ان کی سہ پرستی بھی کی۔

جنوبی اڑیسہ کے مقابلہ میں شمالی اڑیسہ میں تعلیمی صورت حال
کسی حد تک مختلف تھی۔ ۱۸۶۳ء میں اڑیسہ پر قابض ہونے کے بعد ایسٹ انڈیا کمپنی نے پوری
اورنگ میں تعلیم کی توسیع کے لئے اقدامات کئے تھے۔ ان دنوں توسیع تعلیم کا کام مشنریوں
کے ہاتھ میں تھا۔ مشنریوں نے تعلیم کی توسیع کے ساتھ عیسائیت کی تبلیغ کی۔ انہوں نے
اڑیسہ میں مانعہ خاتم کیا اور یہاں پر پریس بھی قائم کئے۔ مشنریوں میں ولیم کیری بنگلہ کے عالم
تھے۔ انہوں نے اڑیا لٹریچر کے حروف بنائے اور ۱۸۶۰ء میں اڑیا زبان میں پہلا بائبل شائع
ہوا۔ اڑیا کی ایک چھوٹی سی ڈکشنری اور ایک پرائمری کتب ولیم کیری اور مارشمن کی
مقامی جیل سے منظر عام پر آئیں۔

۱۸۵۹-۱۸۵۸ء کے دوران شمالی اڑیسہ میں صرف ۳۰ اسکول

تھے۔ ۱۸۶۸ء میں ان کی تعداد ۶۳ ہوئی اور ۱۸۷۶ء تک یہ تعداد بڑھ کر ۹۵ ہو گئی۔ اسی دوران
کینڈرا پاڑن، پوری، بھدرک اور بالیسر کے ہائی اسکولوں میں اردو تعلیم کا آغاز ہوا۔ بھدرک
کی تقریباً ۶۰ فی صد آبادی اردو بولنے والوں پر مشتمل تھی اور وہاں اردو کے اثرات مقامی اڑیا
زبان پر حاوی تھے۔ ادھر صوبہ میں اردو کے نئے اصناف کی تشکیل زیر عمل تھی جس کی مثال
بنسی بلیجہ گوسوامی کے "مغلہ تماشا" سے دی جا سکتی ہے۔ "مغلہ تماشا" اردو کا اولین
ڈراما ہے جسے بنسی بلیجہ گوسوامی نے سنسکرت ڈرامے کی طرز پر لکھا ہے۔ یہ ڈراما بھدرک
کے عوام میں مقبول عام ہے۔

اگرچہ اڑیسہ میں اردو بولنے والوں کی تعداد محض دو فی صد ہے
لیکن تعلیم کے ضمن میں اسے دوسروں کے مقابلہ میں ایسے مانہ نہیں دیا گیا ہے۔ آبادی کے تناسب سے
اسکولوں میں اردو پڑھنے والے طلبہ کی تعداد ہمیشہ بستر رہی ہے۔ ۱۸۸۵ء میں مجموعی طور پر

۱ اردو خزانہ طلبہ کی تعداد ۳۱۸۳، ۱۸۹۵ء میں ۳۲۳۹ اور ۱۹۰۵ء میں ۴۰۲۸ تھی۔

اڑیسہ میں اردو ادب کا قابل استساہ سرمایہ موجود ہے جن میں سے
بابے دوم میں "اڑیسہ میں اردو شاعری کا ارتقا" کے زیر عنوان ہر دے رام جودت،
مولوی سلطان راجی، شیخ امین اللہ چرخی، عبدالمجید بھونیایا، خاتم بہراج پوری، ظہور الحق
ظہوری، مجرم سنبلپوری، فیض النساء تنخیر، شمس الحق شمس، محمد یوسف، معلم سنبلپوری،
منشی عبدالرحیم احسن، عبدالستار عبد، اشرف علی کٹکی، اظہار علی کٹکی، اولاد مرتضیٰ کٹکی،
جان محمد حازم، محمد حسن، نور علی انور، عبدالعزیز عاشق، مولا بخش مولا، مولوی رحمت علی رحمت،
اور امجد تنجی جیسے منتخب شاعروں کی تخلیقات کا مطالعہ پیش کیا گیا ہے اور ان کی نگارشات
میں سے نمونہ پیش کئے گئے ہیں۔ پیش نظر باب میں تمام شاعروں کا تذکرہ یا ان کی پوری تخلیقات
کو منظر عام پر لانے کی گنجائش نہ تھی اس لئے انتخاب میں چند باتیں پیش نظر رہی ہیں۔ اول
یہ کہ اہم فن کاروں کا انتخاب ہو اور دوم یہ کہ انتخاب اس لحاظ سے ہو کہ اردو کی غیر فقہ
فرقہ وارانہ حیثیت ثابت ہو سکے سوم یہ کہ ان ادبی نمونوں کو سامنے لانے کی کوشش کی جائے
جن سے اردو دنیا عام طور پر واقف نہیں ہے۔

بابے دوم کے پیش کش میں یہ ترتیب ملحوظ رکھی گئی ہے کہ پہلا
شعراے متقدمین کا بیان ہو پھر دور وسطیٰ کے شعرا کا ذکر اور آخر میں دور جدید کے شعرا کا
تذکرہ سامنے آئے۔ دور جدید کے شعرا میں "جدید" شاعروں کو صف بستہ نہیں کیا گیا ہے بلکہ

اڑیسہ میں جدید شاعری کے پس منظر میں مذکورہ شاعروں کا بیان آخر میں رکھا گیا ہے۔
 ستر سوئیں صدی عیسوی تک پہنچنے پہنچنے اردو ایک مکمل تخلیقی زبان
 بن چکی تھی۔ اردو کے مرکز سے دور ہونے کے باوجود اڑیسہ سے اردو والوں کا رابطہ قائم تھا۔ خان دہلوی
 ستر ۱۶۶۶ء سے ۱۶۶۶ء تک اڑیسہ کے صوبہ دار رہے۔ اسی زمانہ میں مرزا عبدالقادر بیدل اپنے چچا
 مرزا قلندر کے ساتھ شہر ٹنگ میں قیام پذیر تھے۔ اسلوب و معانی کے لحاظ سے ان کا کلام گنجینہ معانی
 کا ظلم اور درک و بصیرت کا سنگِ اُمین ہے۔

فتح، عشق اور شورش نے اپنے تئز سروس میں ہر دے رام جوت کا تذکرہ
 کیا ہے جو اڑیسہ کا اولین شاعر گنرا ہے۔ ہر دے رام جوت کا وطن ٹنگ تھا لیکن ان کا قیام زیادہ تر
 مرشد آباد میں رہا اور وہیں ان کا انتقال بھی ہوا۔ جوت فارسی کے جید عالم تھے۔ بنیادی طور پر وہ فارسی
 کے شاعر تھے۔ اردو میں محض تغنن طبع اور شوق کی خاطر کہہ لیا کرتے تھے۔

مولوی محمد سلطان راجی ایک صوفی المک بزگ تھے۔ دکن سے شہر ٹنگ میں
 وارد ہوئے۔ شہر ٹنگ کے بخشی بازار میں ایک مسجد تعمیر کروائی۔ عمر عزیز کا بیشتر حصہ منہ ہی تبلیغ اور
 رشد و ہدایت میں صرف کیا۔ ان کی تصنیفات و تالیفات میں "فصیح الحلال والحرام" (۱۲۸۴ھ) "مجموعہ
 خطبائے دوازدہ ماہی" (۱۲۸۶ھ) "معرفت خدا و رسول" (۱۲۸۵ھ) اور "مہتاب المجالس" (۱۳۰۳ھ)
 اڑیسہ میں اردو شعر و ادب کے ابتدائی رجحانات کی نشان دہی کرتے ہیں۔ "مجموعہ خطبائے دوازدہ ماہی" میں
 موصوف نے ہر خطبہ کا اردو میں منظم ترجمہ کیا ہے جس سے ان کی علمی بصیرت کا پتہ چلتا ہے۔ بہر حال ان کے
 اشعار کو محض شاعری کے تناظر میں دیکھا نہیں جاسکتا بلکہ اڑیسہ میں اردو کے ارتقا میں منہ ہی لٹریچر اور
 تبلیغ کے توسط سے سلطان راجی کی ادبی خدمات کا محاسبہ کیا گیا ہے۔

شیخ امین اللہ حیرتی (متوفی ۱۸۷۹ء) اڑیسہ کے اولین صاحبِ دیوان

شاعر گذرے ہیں۔ "دیوان چرنی" ۱۹۰۷ء میں شائع ہوا جس میں ۲۵۲۰ اشعار پر مشتمل ۲۲۷ غزلیں ہیں۔ چرنی ایک صوفی شاعر تھے اور وحدت الوجود کے فلسفہ پر اعتقاد رکھتے تھے۔ ان کے سوا اڑیسہ کے کسی اور شاعر کو خالصاً صوفی شاعر کہا نہیں جاسکتا۔ ان کے کلام سے اندازہ ہوتا ہے کہ انہوں نے اردو کی کلاسیکل شاعری کے بجائے فارسی کی صوفیانہ شاعری سے گہرا اثر قبول کیا تھا۔ ان کی شاعری کا موضوع تصوف ہے اور انہوں نے اظہار کے پیرایہ میں مشکل زمینیں منتخب کی ہیں اور اس کے باوجود اپنے کلام میں سلاست اور روانی قائم رکھی ہے۔

عبد المجید بھونیاں جیا (ولادت ۱۸۹۰ء) ۱۸۹۱ء میں جیانے "دیوان مجید" ردیف وار مرتب کیا۔ اسکی بارہ جلدیں ہیں جو بارہ وفات کی مجالس میلاد کے لئے مختص ہیں۔ جیانے اپنے تصور و تخیل کے گرد عشق رسول کا عالم قائم کر رکھا ہے۔ انہوں نے اپنے کلام میں ترقی پذیر اردو زبان کا نمونہ پیش کیا ہے جس سے اڑیسہ میں اردو شاعری کے ارتقاء کے پس منظر میں تہذیبی اعتبار سے ارتقاء پذیر اردو کا نقشہ واضع طور پر ہمارے سامنے آتا ہے۔

باب دوم میں اڑیسہ کی اولین شاعرہ فیض النساء تسخیر (ولادت ۱۸۶۶ء) کی حیات و شاعری کا محاسبہ پیش کیا گیا ہے۔ تسخیر کے کلام میں مذہبی تنوعیت نہیں ہے بلکہ ایک نئی فکر کا احساس جھلکتا ہے۔ محمد یوسف (ولادت ۱۸۹۴ء) کا کلام شمالی ہند کے موباری رسائل میں شائع ہوتا رہا ہے۔ ان کی شاعری اپنے عہد کی حیات کا منظر پیش کرتی ہے۔ ان کے آخری دور کی شاعری سے ذاتی کرب اور تنوعیت آشکارا ہے۔ معلم سنیلوری (متوفی ۱۹۶۱ء) کو امیر منائی سے شرفِ قلم حاصل ہوا تھا۔ ان کا دیوان کاغذ سخن ۱۹۱۳ء میں شائع ہوا۔ دیوان میں ان کی ۱۵۵ غزلیں ردیف وار مرتب ہیں انہوں نے اپنے کلام میں صنائع و بدائع کا طرز استعمال کیا ہے۔ ان کے شاعر دوں کا ایک وسیع حلقہ تھا۔ سید عبدالستار عبد (ولادت ۱۸۹۳ء) ۱۹۳۵ء میں عبد کا مجموعہ کلام "نغمہ ستار" کے نام سے شائع ہوا جس میں ان کی ۱۰۱ نعتیہ غزلیں درج ہیں۔

انیسویں صدی میں اڑیسہ میں اردو زبان و ادب کو خاصہ فروغ حاصل ہو چکا تھا۔ لوگوں کے سوچنے کا انداز بدل رہا تھا۔ سحر کے کلام میں منہرہ رجاؤں پر تغزل کا رنگ حاوی ہو رہا تھا جس کا مظاہرہ اشرف علی تھکلی، اظہار علی تھکلی اور اولاد مرثیہ لکھی کی تخلیقات سے ہوتا ہے۔

باب سوئم میں اڑیسہ میں اردو نثر کے ارتقا کا بسیط جائزہ لیا گیا ہے اڑیسہ میں شاعری کے مقابلہ میں نثری تخلیقات کا سرمایہ نسبتاً کم ہے۔ سب سے قدیم نثری تصنیف مولوی محمد سلطان راجہ کی ہے۔ عام طور پر ایک ایسے شاعر کے لئے جو اپنے شاعرانہ وجدان کی پہنائیوں میں گم رہتا ہو سنجیدہ نثر لکھنا مشکل ہوتا ہے لیکن مولوی سلطان راجہ کے سامنے منہرہ اور تہذیب ارتقا کی راہیں تصرف کے مدارج سے جوگز گذرتی تھیں۔ ان کی نثری تخلیقات میں اس عہد کی ادبی زبان کی تمام خوبیاں موجود ہیں۔ اس باب میں مولوی فیض نظام غوث کی تصنیف ”نبی العری“ کا بھی جائزہ پیش کیا گیا ہے اور مولوی رحمت علی رقبہ کی نثری تصنیف ”رفیق العشق“ کا بھی مطالعہ پیش کیا گیا ہے جو یقینی طور پر اڑیسہ میں اردو نثر کے ارتقا کی ایک اہم اڑی ہے۔ محمد یوسف، مولوی عبدالرشید، نقاد، امجد نجمی، پنڈت کشمی نرائن، نور اور شیخ حبیب اللہ کی نثری تخلیقات کے علاوہ اڑیسہ کے اردو ادیب کی تاریخ اور اردو ڈراموں کا محاسبہ کیا گیا ہے۔ اس باب میں اردو اف نون کی پیشرفت پر بھی صراحت کے ساتھ جائزہ لیا گیا ہے۔

باب چہارم میں اڑیسہ میں اردو صحافت کی تاریخ مرتب کی گئی ہے اور اردو صحافت کے ارتقا میں اناپامہ المنصور، ہفتہ وار مسلم گزٹ، ہفتہ وار اردو جرنل، ہفتہ روزہ بیداری، اناپامہ شافار، اور اناپامہ صدائے اڑیسہ کی اہمیت کا جائزہ لیا گیا ہے اور ساتھ ہی ساتھ ذیلی ابواب میں اردو تنقید کا جائزہ لیا گیا ہے۔ اردو تنقید کی اہمیت علی کرامت، محمد دایسری، یوسف جمال، تجمل علی فہمی اور شیخ حبیب اللہ کی تنقیدی

بصیرت کا مناسبہ کیا گیا ہے۔ آخری ذیلی باب میں اڑیسہ میں اردو تحقیق اور موضوعات کے ماخذ کا جائزہ لیا گیا ہے۔

باب پنجم "عہد جدید میں اڑیسہ میں اردو کی صورت حال" سے متعلق ہے۔ اس باب کے تحت چار ذیلی ابواب قائم کئے گئے ہیں :

(الف) پہلے ذیلی باب میں عہد جدید میں اڑیسہ میں اردو شعر و ادب کا تذکرہ ہے۔ اس میں اڑیسہ کے شعرائے ماضی میں مولوی برکت اللہ برکت، مولوی عبدالحلیم حلیم، عجیبہ خاتون عجیب، عبد الرحیم راقم، عبدالحلیم نعیمی، عبد اللطیف عارف، حفصہ الباری حافظ، سید منظر حسن شمس الہدیٰ شمس، مصلحت ایزدی اور تہجلی علی فہمی کا تذکرہ ہے۔

اڑیسہ کے جدید شاعروں میں سے حیدر نایاب، رفیق درد، ظہیر اللہ کرامت علی کرامت، بہار الدین ریاض، عبد الحمید فیضی، شکیل دسنوی، خالد رحیم، یوسف جمال، ساجد انثر، اسماعیل آذر، رشی کانت راہی، الطہر عزیز، الطاف حسین راشد شبنم، الطاف نادر، عبد المتین جامی اور اولاد رسول قدوسی کا انتخاب پیش کیا گیا ہے۔ ان شاعروں نے اپنے عہد کے مختلف ادبی رجحانات اور شعری روایات سے متاثر ہو کر مختلف النوع شعری تجربہ کئے جس سے ان کی عصری آگہی اور تنقیدی بصیرت کا اندازہ ہوتا ہے۔ ان شعرائے کلاسیکل شعری روایات کی پاسداری کے ساتھ ساتھ جدت، تنوع، اور عصری حسیّت کو اپنے تخلیقی رویہ کا جزو بنایا۔

اس کے علاوہ بیرونی شعرا و ادبا جو زمانہ دراز تک اڑیسہ میں مقیم رہے اور یہاں اردو کی تحریکوں سے وابستہ رہے ان کے تخلیقی رویوں کا بھی بطور خاص جائزہ لیا گیا ہے۔ اس ضمن میں حافظ شمس منیری، اصغر علی بیدک، پیرو فیروز شکیل الرحمن، عبد الحلیم خنجر، مظہر امام، امجد علی

فرحت زیدی - سیلانی سیرتے - خالد شغانی - خان یازی امروہی - گھائی فریدی - چارغنی
شہاب الدین مہرانی - عظیم شکری - حبیب الدہلوی - ڈی بین شہر اسوز - خواجہ بیاض الزماں - غلام مہدی راز -
طہر شتاق - عبدالرزاق راجی وغیرہ لا تذکرہ کیا ہے -

(ب) اس ذیلی باب میں "عہد جدید میں اُردو" میں اردو تہذیب کی صورت حال کا مکمل جائزہ پیش
کیا گیا ہے جس کے تحت ابتدائی، ثانوی، فوق لسانی اور درسی تنظیم کی تعلیم مندرجہ ذیل تک کا تہذیب
جائزہ لیا گیا ہے اور ساتھ ساتھ اردو تعلیم کے مسائل اور مستقبل سے بھی بحث کی گئی ہے -

(ج) اُردو میں اردو کے ارتقا میں وطن کے ادبی اور ثقافتی اداروں نے اہم کارنامے انجام دیے ہیں
چنانچہ اس ذیلی باب میں اہم ادبی اور ثقافتی اداروں کا تعارف و تذکرہ پیش کیا گیا ہے -
(د) اُردو میں زمانہ قدیم سے اردو کتب و طباعت کے ذرائع معدودہ ہیں اس کے باوجود اہل علم
حضرات نے اپنی کتب میں شائع کی ہیں - اس باب میں اُردو کی اشاعتی سرگرمیوں کا
عقیق جائزہ لیا گیا ہے -

پیش نظر مقالہ میں اُردو میں اردو زبان کی نشوونما کی مختصر صورت حال

کا تفصیلی مطالعہ پیش کیا گیا ہے - اس ضمن میں چار اہم سرچشمے سامنے آتے ہیں - سب سے پہلے صوفیائے
کرام نے اپنے روش و بدایت میں مکتبہ زبان کا وافر استعمال کیا ہے جس سے اُردو جیسے غیر اردو علاقہ میں اس
زبان کے فروغ کی موافق فہم تیار ہوئی - زبان صوفیائے نظام کے مزارات اس بات کی نشان دہی کرتے ہیں کہ
اردو نے ابتدائی سرچشمے میں صوفیائے کرام کی زبانوں سے متعلق تھی - اُردو میں مسلم مکتبہ انوں کی سرپرستی
اور پشت پناہی میں صوفیائے کرام کو اہم کی حیثیت وراثت کے ساتھ فراہم ہوئے - انہوں نے اُردو کے مرکزی علاقوں
میں اپنی ثقافتیں قائم کیں اور وہیں رہے ہیں - اس زمانہ میں بیرونی مسلم مکتبہ انوں کی افواج اور صوفیائے کرام کے پاس
اُردو میں اسلام کے تبلیغ کی ایک ہی ٹوٹی پھوٹی زبان تھی جو دینی اور اس کے قرب و جوار کے علاقہ میں اپنے گمنام بنے

درست کر رہی تھی۔ دوسری طرف مجرت کے عمل نے اردو کو ملک کے گوشہ گوشہ میں پہنچایا اور اُردو سہیلی اس نکل سے سرفراز ہوا۔

اردو زبان کی نشوونما یہاں انتظامیہ کو بھی بڑی حد تک مدد ملی ہے۔ ۱۸۳۶ء تک اردو اُردو سہیلی سرکاری زبان بن گیا ہے۔ راقم الحروف کو دراصل انیسویں صدی کے اردو میں تقریر شدہ متعدد قوانین اور ایک دستیاب ہوئے ہیں جن سے اس بات کی نشان دہی ہوتی ہے کہ انتظامیہ کے وسیلے سے اُردو سہیلی میں اردو زبان کو خاصہ فروغ حاصل ہوا۔

اردو زبان کے فروغ میں جہاں صوفیائے کرام، انتظامیہ اور تعلیمی اداروں نے اہم خدمات انجام دیں اردو اخبارات و رسائل نے بھی قابل ذکر رول ادا کئے۔ اگرچہ اُردو سہیلی میں زمانہ قدیم سے لے کر آج تک محض چند اخبارات و رسائل شائع ہوئے لیکن ملک کے دور دراز علاقوں سے شائع ہونے والے اردو کے تقریباً تمام علمی، مذہبی، ادبی اور سیاسی رسائل و جرائد اُردو سہیلی کے مرکزی علاقوں میں پہنچتے رہے ہیں۔ اُردو سہیلی میں اردو کے جو علاقے ہیں وہاں اردو کے علاوہ متعدد زبانیں بولی جاتی ہیں اُردو سہیلی کے مسلمانوں نے اردو کو تہذیبی زبان کے طور پر اپنایا ہے۔ ہر ہم پر گنجنام اور کورا پٹ ضلع میں بولی جانے والی اردو پر دکنی اثرات حاوی ہیں۔ سرزمین اُردو سہیلی میں اردو ادب کا جو سہاگہ سائے اُڑا ہے اس میں ہریت کے اعتبار سے شاعری افسانہ، ڈراما اور تنقید قابل ذکر ہیں اور مواد کے اعتبار سے ان تخلیقات پر مختلف طبقہ کی تحریکوں کے اثرات پائے جاتے ہیں۔ بنیاتیچہ گروہی نامی تاشا خاص طور پر قابل ذکر ہے جو اردو کا اولین ڈرامہ ہے۔

اس مختصر جائزہ سے مراد یہ ہے کہ اردو دہلی، لکھنؤ اور دکن میں ہی نہیں ہندوستان کے مختلف علاقوں میں ان علاقوں کی تہذیبی خصوصیات کو سمیٹ کر اور ان اثرات کو اپنے جلوں لے کر اور اپنا کر ابھری ہے اور اس اعتبار سے وہ ایسی کل ہند زبان اور ادب کی نمائندہ ہے جو قومی بھی ہے اور علاقائی انفرادیت کی خورشید سے لامال بھی۔

— حنیف اللہ نیرلیہری، جواہر لال نہرو یونیورسٹی دہلی

An Analysis of tax Structure and Tax Evasion in Rajasthan : 1960-61 to 1979-80

Shekhar Prakash Mehta

Sup : Prof. Sheila Bhalla

Despite the growing literature on tax evasion, no non-official study has been done on tax evasion with respect to state taxes. Moreover, in the literature, tax evasion is ill defined from the analytical stand point. Thus, the present study attempts to examine the state tax structure with special reference to the evasion problem in Rajasthan, and to define the concept of tax evasion more suitably for analytical purposes.

In this study tax evasion is conceptualised so as to include not only those tax losses which are caused due to the underreporting or non reporting of the taxable bases generated in the white economy, but also those tax losses caused consequent upon the non-reporting of taxable bases originating in the black economy. Accordingly two broad categories of tax evasion are identified, namely; simple evasion, which is related to the white economy; and compound evasion, which pertains to the black economy. Further, two main variants of compound evasion are distinguished: first compound evasion in the private sector, and second, compound evasion in the politico-administrative sector. Besides these two main categories, another category of tax losses has also been identified. This category is associated with the incomplete coverage of economic activities under the existing statutes and regulations. The reason for this is that the tax department, in the name of administrative convenience, confines the tax coverage to limited areas, and thus narrows the tax base and hence reduces tax revenue.

The categories of tax losses thus defined have some definite advantages over the existing single category of tax losses which takes

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account the losses caused owing to underreporting or non-reporting of taxable bases generalised in the white economy only. These categories are helpful not only in examining the sources of tax losses, but also in identifying the reasons why the estimated magnitudes of evasion differ from one study to another, and from one commodity to another. In addition, this type of classification is useful in pin-pointing the exact causes of tax revenue losses and in suggesting appropriate remedial measures for curbing tax evasion.

In the study, the specific factors which cause different types of tax losses are considered in detail. The influence of other factors commonly referred to in the literature, such as "excessively" high tax rates, restrictions and controls on economic activities, complicated tax law and high rates of inflation are critically examined. The opportunities for evasion open to the public which are built in the administrative, economic, and political system of the country emerge as a fundamental factor in tax evasion. It was concluded that, to alter this situation, much depends on the emergence of political will to enact laws to curb tax evasion, to penalize tax evaders and to press the tax administration to implement such laws strictly.

Apart from the study of the causes of tax evasion, it was shown that some of the most widely accepted propositions relating to tax evasion are not generally valid. For instance it has been demonstrated that changes in the ratio of evasion to collected tax revenue (or to expected tax revenue), do not affect tax elasticity, other things remaining the same. Elasticity is affected adversely only if the evasion ratio is increasing with respect to the tax base. A corollary drawn is that the same value of the elasticity coefficient of tax revenue for two different periods may imply that the proportion of evasion with respect to collected tax revenue (or to the expected tax revenue), is constant over the two periods.

It was also demonstrated that tax evasion may improve consumer surplus in the case of an individual, and that it may also improve vertical equity under specified conditions. On the basis of these specified conditions, it was established empirically that evasion of the sales tax in Rajasthan was likely to have improved income distribution.

Although the empirical work on tax evasion is specific to the tax structure of Rajasthan, the methods developed for computing tax losses in the state can be applied to estimate the magnitude of tax losses in other states as well, with some modifications, depending upon the tax structure of the state in question.

In this study, the magnitude of tax losses is measured for only three taxes, namely the sales tax, the state excise duty, and the entertainment tax, all of which are generally considered to be highly vulnerable to evasion. These three taxes, however, contributed more than 70 per cent of total state tax revenue in 1979-80.

The empirical work revealed that evasion caused losses of the order of 47 per cent of expected tax revenue from three taxes in 1979-80. However, evasion is more widespread on the state excise duty (73 per cent) than on the entertainment tax (38 per cent) and the sales tax (39 per cent). The reason for the comparatively high incidence of evasion on the state excise duty is that the evasion figure in this case includes both simple evasion relating to the white economy, and compound evasion, pertaining to the black economy, while the tax loss figures associated with the sales tax and the entertainment tax include only simple evasion. In the case of the sales tax, the evasion figures relating to some commodities include also the losses caused by the incomplete coverage of the statutes and regulations.

In the case of the sales tax, the magnitude of evasion was calculated only for seventeen commodities, which, however, accounted for 35 per cent of total sales tax revenue in the state in the year 1973-74. This year was the study period for the measurement of sales tax evasion, and the figures for total sales tax evasion for the years 1973-74 and 1979-80 were computed on the basis of the average estimate for seventeen commodities. The year 1979-80 was the study period in the case of the state excise duty and the entertainment tax. The figures pertaining to each of the seventeen commodities indicate that the maximum sales tax losses, as a percentage of expected sales tax revenue, took place on spices, and ghee and butter—about 78 and 90 per cent respectively—and the minimum tax losses occurred on chemical fertilizer (10 per cent), toilet soap (14 per cent) and hydrogenated vegetable oil (14 per cent). The reason identified for the high degree of evasion on spices, and ghee and butter is that a large proportion of these commodities are sold through unregistered traders, and hence their turnover was not captured under the existing statutes and regulations. That is, their low degree of market orientation is mainly responsible for the large magnitude of tax evasion. This type of tax losses does not take place on chemical fertilizers, toilet soap and hydrogenated vegetable oil.

In absolute terms, evasion on three taxes : the sales tax, the state excise duty and the entertainment tax combined, generated a tax loss of Rs. 51 crores in 1973-74 and of Rs. 128 crores in 1979-80 against their

revenue contribution of Rs. 54 crores and Rs. 143 crores in 1973-74 and 1979-80 respectively. It was further established that tax evasion of two taxes—the motor vehicles tax and land revenue—is not significant. Estimates of total tax losses in the state excluding these two taxes, revealed that the state government lost tax revenue of the order of Rs. 62 crores in 1973-74 and Rs. 160 crores in 1979-80 as against the total tax collections of Rs. 66 crores and Rs. 178 crores in 1973-74 and 1979-80 respectively.

Thus the study concluded that a large amount of tax revenue could have been mobilized, without resorting to additional discretionary measures had the tax administration worked a little more effectively.

Aside from the work on tax evasion, an attempt is made to evaluate the productivity of the state tax structure in Rajasthan in relation to that in all states combined. With this purpose in view, estimates of growth rates, elasticities, and buoyancy coefficients were computed for eight state taxes, namely the sales tax, the state excise duty, the passenger and goods tax, the motor vehicles tax, the stamp duty and registrations fees, land revenue, the entertainment tax and the electricity duty. In addition, regression analysis was used to examine the determinants of revenue from eight state taxes separately for Rajasthan, and for all state combined as well.

The coefficients for the growth rates, buoyancy and elasticity of eight state taxes were reckoned for the period 1960-61 to 1979-80 as a whole, and then for the decade of the sixties—from 1960-61 to 1969-70—and for the decade of the seventies—from 1970-71 to 1979-80. The estimates computed for all states combined provide a norm against which the estimates for Rajasthan are compared.

The elasticity estimates indicate that despite the fact that evasion figures indicate widespread tax losses in Rajasthan, the productivity of total state tax revenue has improved considerably in the 1970s as compared to the 1960s. For example, the elasticity coefficient of total state tax revenue has increased from .64 in the 1960s to 1.25 in the 1970s. The elasticity coefficient of total state tax revenue was less than one for the two decades combined, from 1960-61 to 1979-80. However, it turns out to be greater than one if land revenue is excluded from total state tax revenue.

Among the eight state taxes, the study has shown that in the 1960s, no tax except the sales tax and the electricity duty was an elastic source

of revenue in Rajasthan, while in all states combined all state taxes except the motor vehicles tax, the stamp duty and registration fees, and land revenue were found to be elastic sources of tax revenue in the same decade. In the decade of the seventies in Rajasthan, the elasticity coefficients of all taxes except the motor vehicles tax, the stamp duty and registration fees, land revenue and the state excise duty were identified as elastic sources of revenue. In all states combined four taxes, namely the motor vehicles tax, the stamp duty and registration fees, land revenue and the electricity duty were not found to be elastic revenue sources in the same decade.

Finally, it was shown that three taxes—the motor vehicles tax, land revenue and the stamp duty and registration fees—were inelastic sources of tax revenue in Rajasthan as well as in all states combined in both decades. In Rajasthan only, another revenue source, the state excise duty was also not an elastic tax in either decade.

The reasons for the income elasticity or the income inelasticity of each tax separately, were thoroughly examined in the study. It was found that the specific nature of certain taxes—the motor vehicles tax, land revenue and the electricity duty—is itself responsible for the inelasticity of these taxes, since their specific nature makes these taxes unable to capture the changes taking place in the nominal value of the tax base in the long run. However, in the case of the state excise duty, which is also a specific tax, another reason—the relatively high price of licit liquor, as compared to the price of illicit liquor—was found to be the major cause of its income inelasticity in Rajasthan, rather than the reason usually put forward, namely the prohibition policy. In the case of the stamp duty and registration fees, which is, however, an *ad valorem* tax, the acute problem of under-valuation of immovable property, which is the base of this tax, was identified as the chief reason for its inelasticity.

However, having considered the large magnitude of the income elasticity of the sales tax and the entertainment tax, on which the extent of evasion was also computed to be great, the study concluded that tax evasion, generally, does not seem to have had a significantly adverse effect on the elasticity of state taxes. Moreover, most of the taxes which were found to be inelastic are the specific taxes which are the least vulnerable to evasion practices.

The analysis of the causes of the income inelasticity of different taxes leads directly to certain suggestions. For example, the specific

taxes should be converted into *ad valorem* taxes, or alternatively, some relationship should be established between the rates of specific taxes and the changes in the nominal value of the tax bases by raising the rates by some specified proportion of the changes in the nominal value of the tax base. In addition, attempts should be made to assess the value of immovable property, stated in the 'instrument' at the time of the transactions, at its market value so that the stamp duty and registration fees can capture the changes in the nominal value of the tax base. In the case of the sales tax, which is, however, an elastic revenue source in Rajasthan as well as in all states combined in both decades, it was suggested that the tax should be levied on the last registered dealer instead of on the first registered dealer, as is the case at present in Rajasthan, so that at least the additions to value between the first and the last registered dealers can be tapped for tax purposes.

Finally, it was found that the Rajasthan state government made greater tax efforts than the average tax effort of all states combined, in relation to almost all taxes except the electricity duty, during the two decades combined. In addition, it was observed that in the period when the automatic growth factor did not operate effectively state government made generally greater tax efforts in order to achieve the tax revenue targets set in the budget, while the tax effort has tended to weaken in the period when tax elasticity has risen.

Performance of the Bangladesh Handloom Industry : 1947 to 1980

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The handloom industry with its long tradition has remained important in the national economy of Bangladesh. Its current production covers about 80 per cent of the total cloth supplies in the country. This industry currently provides direct employment to 848 thousand persons, which accounts for 3.6 per cent of the country's total workforce. Its contribution to GDP is about 9 per cent of the share of the entire manufacturing sector.

This important industry, which has survived to a significant extent, is believed to have experienced "retarded" growth. The present study examines this problem through an analysis of various aspects of the growth, structure, and performance of the industry. The reference period of the study covers the years from 1947, the year of partition of the Indian sub-continent, to 1980. Specifically, the objectives of the study are : (i) to look into the size and output trends of the industry from 1947 to 1980, and the factors that explain them ; (ii) to analyse the structure of the industry and within the given structure, its production performance and growth ; and (iii) to examine the role of government in maintaining and developing the industry.

The study is divided into 9 chapters. The data used in this study come from two sample surveys conducted in phases from 1978 to 1980, from secondary sources (published and unpublished official and non-official materials), and from intensive field visits by the present author.

The available time-series statistics on looms and employment reflect the growth of the industry during the period 1946 to 1953, its

decline till 1964, and the subsequent revival after 1972. The number of looms increased from 134.35 thousand in 1946 to 383.76 thousand in 1953 ; it then declined to 265 thousand in 1964, and increased again to 428 thousand in 1972 and 437.02 thousand in 1978. However, the data on looms for the years 1953, 1972, and for 1978 have been criticised on the grounds that they are overestimates.

There was no change in the composition by type of cloth woven on handlooms during the long period from 1956 to 1978. Nearly 95 per cent of the cloth woven was of cotton.

Major political events, first, the partition of the Indian sub-continent in 1947 and second, the liberation of Bangladesh from Pakistan in 1971, appear to have had a measurable impact upon the growth of the handloom industry.

Immediately after partition in 1947, the handloom industry suffered a drastic set back in its production. This set back was mainly due to a yarn shortage. Most of the spinning mills which had provided yarn to this industry fell within post-partition India. The surplus yarn from the cotton mills falling within the Bangladesh part was only of the order of 1.85 million lbs as compared with the roughly 50-55 million lbs required by the industry.

However, the crisis was overcome soon through smuggled yarn from India, and subsequently by liberal imports from foreign countries. The handloom industry also got a stimulus towards growth from the elimination of competition from Indian mill-made cloth and Madras handlooms. As a consequence of these factors, the industry achieved a very high rate of growth during the brief period 1949 to 1952.

This industry ceased to grow further after 1952, initially due to the restrictions imposed on yarn imports, along with all other imports, consequent upon the country's worsening foreign exchange position. The import restrictions on yarn and cloth were enhanced later to protect the growth of the large-scale cotton textile industry in Pakistan. The then Pakistan Government pursued other favourable commercial and industrial policies, and as a result, the mill industry grew rapidly, especially in West Pakistan. The import of yarn from abroad remaining restricted, and the surplus yarn from the domestic mills being quite inadequate, the handloom industry of Bangladesh became heavily dependent upon supplies from Pakistan (West). This had consequences for handloom production.

Handloom output was estimated for the period 1955/56-79/80, using data on net yarn availability for handlooms, under specified assumptions. The output of the industry underwent many short-term fluctuations with negligible long-term growth. The short-term fluctuations in the estimated output were accounted for mainly by the changes in the yarn supplies from Pakistan (West), particularly due to the operation of the Export Bonus Scheme and the consequent export of yarn to foreign countries, during the period 1959/60-69/70.

The sharp fall in output in 1970/71 was due to the War of Liberation, and the decline immediately after liberation in 1971 was owing to the yarn shortage which resulted from the disruption of earlier import links with Pakistan for both yarn and raw cotton. The weavers, however, got some supplies smuggled from India. The yarn supply situation improved considerably after 1974/75, and hence there was a marked output recovery of the handloom industry since 1975/76, due to measures undertaken by the government for easy yarn imports from abroad, and also due to the improvement in domestic yarn production and its distribution. Yarn supply, however, remained inadequate for the handloom industry.

The long-term trend in output of the industry was sought to be explained by mill competition which, however, failed to account for the observed trend. The relative shares of mill-made cotton cloth, including imports, not only showed no increase but declined over time, especially in the postliberation period. The long-term survival, if not noticeable growth of the industry, against the large-scale cotton mills and the import of cotton piece-goods, was found to be attributable to several factors. First, the growth of domestic cotton mills was complementary to rather than competitive with, handlooms. Further, the then Pakistan Government undertook and maintained certain fiscal measures, such as the imposition of excise duty and sales tax on mill-made cloth and exemption of handloom products from them, which gave effectual protection to the latter against the former. During the post-liberation period, although the fiscal protection was gradually withdrawn, there was output control of the mills under public ownership and control. Besides, the mills under public management have been running inefficiently. On the other hand, the handloom industry has been enjoying certain other advantages over the mills. These are : consumers' preferences for handlooms in the main lines of products such as *sarees*, and *lungis* ; production of certain specialised fabrics like *jamdani* and *muslins* and superfine Tangail *sarees*, which are demanded by the elite class of the population, and which the mills cannot produce;

and above all, in addition to family labour, there are cheap supplies of outside labour, especially female and child labourers who tend to work below the subsistence wage, and who are employed in pre-weaving processes. These factors were responsible for the survival of the handloom industry against mill competition. The mill-owners realised that the handloom industry would survive and that there would be longterm demand for yarn from this industry. This led the millowners to cut their cloth output voluntarily and to expand spinning capacity. During the period 1949-70, there was no long-term growth in the cloth output of the domestic mills, but there was an increase in yarn output, although the mills were unable to supply all the yarn requirements by the handloom industry. The free import of mill-made cloth from Pakistan (West) also did not encroach upon the handloom market during the pre-liberation period, due to the factors summarised above. In the post-liberation period, the availability of mill-made cloth has diminished substantially.

Despite these favourable factors, the handloom industry merely maintained its production levels with almost no longterm growth during the period 1955/56-79/80. The available evidence suggests that there was a demand constraint on the growth of handloom output in the late sixties. The fall in per capita demand for cotton cloth, not only of handlooms but also of mill-made cloth to some extent, appears to have been due to the availability of substitutes, mainly synthetics and partly second-hand clothing (imported), and to the fall in real income of a large section of the population, owing to the rise in the relative price of rice and the fall in jute prices. These factors have been present in the post liberation period also. But, in this period, the binding constraint on the growth of handloom output has been identified to be the shortage of yarn supplies.

The performance of any industrial activity is conditioned also by its own structure, which involves the production organisation, the background of the industrial proprietors, employment and labour, the level of technology, its finance and investment, the organisation of the supply of raw materials, and the marketing of the products. These aspects are analysed in the present study.

The production of the handloom industry is organised largely in family or household units, although there has been a certain growth of *karkhanas*, a capitalist system of production. Noticeable changes in production organisation appear to have taken place after partition, and subsequently following the Indo-Pak War of 1965, due to the cross-

migration of weavers between India and the then Pakistan. The capitalist organisation of the *mohajan*, who supplies the weavers with yarn and takes back the cloth giving them piece-rate wages, has become less prevalent because of the out-migration of the Hindu *mohajans*, who formed the majority, to India, while the other form of capitalist organisation—the *Karkhana* system—seems to have increased to some extent partly by the immigration of Muslim weavers from India. The other important reasons for the growth of *Karkhanas* may have been the increased profitability of the handloom industry after partition, and the lack of suitable investment opportunities elsewhere. Of course, some *mohajans* were found to have shifted from the handloom business to small powerloom production.

The production of handlooms is a traditional craft, and most of the weavers take the job of weaving as a heritage from the earlier generation. Still a significant proportion of the weavers are found to have come from outside of the craft, from agriculture and from other occupations. This by itself would imply the growth of the industry. But some weavers also have left the industry. On this, unfortunately, there is no data for analysis. However, the increase in the number of industrial units over time indicates that the net result of entry into and exit from the industry is positive, and thus the industry is growing in terms of industrial units.

The handloom activity is a full-time occupation in most cases of the present day weavers as opposed to the earlier generations of weavers who plied the occupation largely as a part-time one. Therefore, the industry is gaining importance as a full-time occupation.

It is found that the industry has been undergoing a slow rate of technical progress in terms of looms. The traditional throw-shuttle looms have been gradually replaced by the ordinary fly-shuttle and/or Chittaranjan semiautomatic looms to the extent that replacement was needed. But still a large proportion of the looms are of the ordinary fly-shuttle variety which need to be replaced by the modern Chittaranjan looms. Improved techniques in terms of preweaving processes have been gradually adopted by the weavers; but still some improved techniques which have been in use by Indian weavers are unknown to the Bangladeshi weavers. The lack of technical knowledge and skill and also the financial weaknesses of the weavers appear to have been the main constraints on the adoption of more productive looms and equipment. The government, however, created an institution, the Bangladesh Small and Cottage Industries Corporation, as far back as 1957, to help

the industry modernize; but this institution failed to realise this objective. Whatever technical improvements occurred in the handloom industry were mainly through inter-communication among the weavers themselves.

The main structural problems of the handloom industry appear to be related to finance, the supply of raw materials (mainly yarn), and the marketing of the products. The average weaver not only lacks access to sufficient credit facilities but also they have to pay high interest rates on loans from private money-lenders. Lack of own resources and of government institutional credit facilities forces them to depend on costly sources like money-lenders.

The problem in the supply of yarn relates not only to its inadequacy, but also to organisational problems in its distribution. The common weavers have to get their yarn supply through a chain of intermediaries consisting of mill-agents, wholesalers, retailers and/or local *mohajans* which exerts an upward pressure on prices. Moreover, the average weaver who buys yarn mainly on credit has to pay higher prices for yarn. This weakens his competitive position in the product market *vis-a-vis* other weavers who do not generally buy on credit (or buy less on credit).

The post-liberation government made several attempts to eliminate or reduce the number of intermediaries by institutionalising yarn distribution, so that the weavers could get yarn at fair prices. But the situation turned for the worse, rather than being improved. Inefficient administration by the government machinery, and their lack of foresightedness about the necessary logistics, among other things, not only contributed to the failure of the programmes but also complicated the situation. The chain of intermediaries elongated rather than shortened. The weavers had to pay high scarcity premia on yarn prices often not due to real scarcities but owing to artificial scarcities created by the yarn distribution machinery. It is found that in some years in the post-liberation period, there were yarn scarcities in the market despite large stocks with the mills. This had a depressing effect upon handloom production and on the performance of the weavers.

The marketing of output has remained to be dominated over by a chain of intermediaries. In the process of marketing, the weavers get a smaller proportion of the margin than what the intermediaries receive in the process of marketing. Modern marketing practices are completely absent from the scene. The government has remained effectively passive

in respect of the improvement of the marketing system. Co-operatives in marketing are operating in one handloom producing area of the country. But their contribution is negligible.

In spite of many organisational disabilities, the average performance of the handloom industry is not altogether disappointing. The average capacity utilisation of the sample handloom units is estimated to be 70 per cent, which is not low by any standard. Important among the factors accounting for the estimated 30 per underutilisation appear to be the problems in yarn procurement and in the liquidity position of the weavers.

However, the labour productivity of the industry is found to be as low as the average of that in all rural industrial activities together. The low labour productivity of the handloom industry is connected with the low level of technology in terms of mechanisation of looms and other equipment; and organisational disabilities in respect of finance, the supply of raw materials, and marketing of the products. But the profitability of the industry is not very bad. The average weaver earns about 9 per cent margin over the total cost of production, including family labour cost. The margin could have been increased had the industry been properly organised in terms of credit, the supply of material inputs, and marketing.

It is found from the sample survey data that the majority of the weavers cannot save and accumulate capital. Therefore, the majority do not grow, and some even decline. But some weavers are in a position to save and accumulate in order to grow. About 90 per cent of the sample *Karkhanas* have reached this size by growing from humbler origins. The sample units have shown an annual average rate of growth of at least 3.2 per cent throughout their life.

Finally, we may conclude that, given the favourable as well as many adverse factors, the overall performance of the handloom industry during the period 1947-80 has not been altogether discouraging.

Occupational Diversity and Mobility Among Scheduled Castes in Tamil Nadu

S. Selvanathan

Sup : Prof. Sheila Bhalla

Introduction

This study is concerned with the socio economic status of the Harijans in Tamil Nadu. Most of them live in villages, but in the towns as well as in the villages, members of the Scheduled Castes are discriminated against in Tamil Nadu.

The observed concentration of the Scheduled Caste workers in low paying occupations is attributable to centuries of poverty, social discrimination and the imposition of a caste based occupational hierarchy on them. The backwardness of the Scheduled Caste is studied in the present work from the point of view of both occupational stratification and untouchability.

Economic growth tends to bring about an economic transformation which is identifiable in terms of

- (i) changes in the structure of output and
- (ii) changes in the occupational patterns.

Among these two, changes in the occupational pattern or and the occupational mobility associated with it, has an important bearing also on the pattern of income distribution between different groups.

It is contended by development economists like Kuznets and Kaldor that as growth proceeds the work force shifts from less productive occupations in the primary sector to more productive occupations in the secondary and tertiary sectors and in particular to manufacturing. In all the advanced countries of today, these shifts have already occurred. Poor countries remain characterised by the relatively high proportion of their work force in agriculture.

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In India, for the most recent decade there is evidence that the transformation of the occupational structure has begun to take place. But the participation of Scheduled Caste workers in these processes is limited. The degree to which this is due to their social handicaps and to their economic backwardness is difficult to assess, but it can be argued that the social stigma of untouchability, age old subjugation and the value patterns inculcated thereby mitigate against the improvement of their economic position even today. Their social and economic handicaps reinforce one another.

In particular, the persistence of the castebased division of labour is responsible for the present concentration of Scheduled Caste workers in particular jobs. It is argued in this study, that as their economic status improves their social status will also change. Unfortunately however, the results of the last three censuses suggest that the Scheduled Caste workers have not participated in the observed proportionate shift out of agriculture to the same extent as have members of the Non Scheduled Castes.

The present study aims to analyse the impact of economic growth on the members of the Scheduled Castes. To measure the differential impact of structural change, the occupational mobility of the Scheduled Castes can be studied in comparison with that of the Non Scheduled Castes. The census data of 1961, 1971, 1981 and the field survey data are used to analyse such shifts among both the caste categories in rural and in urban areas.

Objectives

The main objectives of the present study are:

- (i) to examine the extent to which Scheduled Caste workers have participated in the occupational shifts observed in the census data.
- (ii) To examine the changes that had taken place from 1973 to 1983 in the land status.
- (iii) To measure the degree of occupational concentration of Scheduled Caste workers as compared with Non Scheduled Caste workers in general, and at a highly disaggregated level, by sub-caste.

- (iv) To examine occupational mobility over three generations for both Scheduled Caste and the Non Scheduled Caste households.
- (v) To find out whether Scheduled Caste workers are as geographically mobile as Non Scheduled Caste workers.
- (vi) To study the extent to which caste discrimination exists in Tamil Nadu and how it was affected to Scheduled Caste.
- (vii) To assess the awareness of Scheduled Caste in facing their problems.

Methodology

The present study is based on the analysis of both primary and secondary data.

The 1961 and 1971 census data was used for the purpose of selection of districts. A modification of the Allan Rodgers Refined Index was used to measure the occupational diversity or concentrations of workers. In these exercises only male workers are taken into consideration since the census data on female workers is not comparable from one census to the next.

In Tamil Nadu five districts were selected on the basis of their occupational diversity or concentration as the case may be. They are Ramanathapuram, Nilgiri, Coimbatore, Chingleput and Tiruchirappalli. From these five districts fifteen sample villages and five towns were selected randomly. At the rate of 22 households in a village and 24 households in a town 450 respondents were interviewed within a period of six months. Among these 450 respondents half are from the Scheduled Castes and other half from the Non Scheduled Castes. Again these respondents were classified into cultivator, agricultural labourer and non agricultural workers. Since the sample size was restricted to the arbitrary number of 450, weights were used to make aggregation possible.

Plan of the Study

This study is divided into nine chapters. The first chapter outlines the problem. A review of literature is presented in the second chapter. The third chapter describes the methodology used for the work on the

secondary and primary data. In the fourth chapter the results of the analysis of the secondary data are given. The fifth chapter deals with salient features of the selected sample villages and towns. The succeeding three chapters are based on primary data. Of these, the sixth chapter gives an account of the land status position, the income and literacy levels of the respondents. In the seventh chapter an analysis of occupational mobility is presented. The eighth chapter gives an account of the social status of the Scheduled Caste. The last chapter deals with the main findings from both the secondary and primary data with policy recommendations.

The Main Findings

The findings of this study can be summarised as follows:

The secondary data shows that more than 70 per cent of Scheduled Caste male workers are in cultivation and agricultural labour in both 1961 and 1971. During this period the Scheduled Caste have tended to move into primary sector jobs. Scheduled Caste male workers remain concentrated in particular occupation. High concentration indices for the Scheduled Caste workers suggest barriers to entry into other occupations.

The field survey data on occupational mobility shows that rural Scheduled Caste workers are more mobile in each of the last three generations (from grand father to adult grand son) and also over the most recent from 1973 to 1983. For the generation of 'father to son' and from 1973 to 1983 the occupational mobility data suggests that both Scheduled Caste and Non Scheduled Caste workers have shifted into non agricultural occupations. From the 'father to son' generation the shift out of agricultural labour is more pronounced for Scheduled Caste than for Non Scheduled Caste families.

The primary data also shows that land operated by Scheduled Caste households is smaller in area than that of the Non Scheduled Castes. Moreover, a higher percentage of Scheduled Caste cultivators operated holdings of smaller size and vice versa for the Non Scheduled Caste. The monthly income and total assets of the Scheduled Caste are significantly lower than those Non Scheduled Caste. A higher proportion of the Scheduled Caste households are in the lower income categories whereas the Non Scheduled Caste are better represented in the higher income categories.

Geographical out-migration is more common among Non Scheduled Caste than Scheduled Caste respondents, but Scheduled Caste out-migrants have travelled longer distances than Non Scheduled Caste migrants. In Nilgiri and Tiruchirapalli districts in-migration is more common than other districts taken for the field survey. The incidence of in-migrants among the Scheduled Caste households is greater than the Non Scheduled Castes.

The daily wages received by agricultural labourers are higher among Non Scheduled Caste than Scheduled Caste workers. The Scheduled Caste agricultural labourers are concentrated in the lower wages categories. Bonded labour system still prevails in Tamil Nadu and the percentage of bonded labourers among Scheduled Caste is higher than Non Scheduled Caste.

About one third of Scheduled Caste and Non Scheduled Caste households borrow money and the majority depend upon money lenders. Scheduled Caste borrowers pay a higher rate of interest than do the Non Scheduled Caste borrowers. The incidence of self employment among Non Scheduled Caste non agricultural workers is greater than among Scheduled Caste non agricultural workers. Urbanization has benefited Non Scheduled Caste households more than Scheduled Caste households. There are proportionately more illiterates among Scheduled Caste than Non Scheduled Caste households.

The study on Harijans social status shows that there is widespread discrimination against members of the Scheduled Castes in Tamil Nadu. There is also discrimination among sub-castes of the Scheduled Caste themselves. Most of the respondents are not aware of constitutional provisions meant for their upliftment. More in the higher income groups have tasted the benefits of reservation than among the low income households. Ironically the Scheduled Caste respondents have suggested inter-caste marriage as one of the methods to eradicate untouchability, whereas they themselves are not prepared for it among the sub-castes of the Scheduled Caste.

Agrarian Change in Punjab : 1880-1940

Neeladri Bhattacharya

Sup : Prof. S. Bhattacharya

In this abstract I will attempt to draw out as well as state some of the general arguments which run through the thesis.

I : As a regional study this thesis has sought to comprehend the history of rural Punjab during the British period. Such a regional study, apart from telling us about the specific facts of Punjab agrarian history, can help reassess some prevalent stereotypes about colonial agriculture. A common view; which developed during the national movement and has come to prevail subsequently, conceives of the colonial peasantry as a uniformly impoverished mass dominated by the triumvirate—state, landlord and moneylender; and exploited through high rates of revenue, rent and interest. The extent of area under tenancy, the volume of debt, transfers of land are all seen only as evidence of this generalized process of immiserization and of the pervasive subordination of the entire peasantry. Peasant involvement in the market is viewed as merely adding new structures of domination to the existent ones. Caught within a cycle of loans and hypothecation of produce, peasants could gain little from the commercialization of agriculture. Yet they were compelled to produce for the market to pay the high revenue, rent and interest rates.

This view conceives of the structure of society as a pyramid with the state at the top and a mass of impoverished producers at the bottom. In between were the intermediaries : zamindars *jotedars*, tenure holders, *sahukars*. The agrarian society below the zamindars was thus flattened. Implicit at times in such a view is the assumption that 'productive' activity was the preserve of the peasantry ; leasing out of land, moneylending, trading—all 'unproductive' economic operations were the domains of intermediaries.

The picture which emerges from our study presents a contrast to such views. We need hardly repeat again that different classes of peasantry were affected differently by the burden of various dues. They were integrated in different ways to the labour, lease, product and credit 'markets'; and these variations in turn defined the long term implications of their involvement in these 'markets'.

That the peasantry was differentiated even before the British rule is now being increasingly recognized. What our study shows is that even share-croppers and debtors, and lessors and lenders did not constitute homogeneous classes. They were internally differentiated not on the basis of income levels alone; share-cropping and moneylending each mediated different forms of social relations. It was to differentiate these forms that we studied the composition of lessors and lessees, debtors and lenders, and analysed the function of different types of tenancy and loan transactions.

It is also clear that in the region of our study the demarcation lines between 'productive' and 'unproductive' classes, between rentier land-owners and producers, between trading, moneylending and cultivation were never clear cut. And over the period the distinctions tended to progressively dissolve. Self-cultivation on the basis of family labour continued to be the basis of agrarian production. But many self-cultivating peasants expanded their holdings by leasing in land, while others with surplus land, leased out. If rich peasants borrowed money to buy land, construct wells or for ceremonial expenses, they also lent out money on a large scale to acquire land on mortgage. Many sold their produce to carriers and traders who came around to the villages, but a substantial proportion of the marketed surplus in many regions was carried by rich peasants directly to the *ṛmandi*. A significant class of peasants thus combined cultivation with leasing-out of land, trading and lending.

High rates of revenue, rent and interest rates appeared as so many barriers to accumulation. Yet these were not set limits structured simply by a given agrarian context. I have persistently emphasized the fact that the burden of these dues varied in accordance with the bargaining power of individuals involved in the transaction. In this sense different classes of peasants confronted these barriers in significantly different ways.

II. In analysing forms of exchange and the calculations which possibly lay behind the economic choices made by peasants we have been repeatedly led to consider the relationship between the economic and the non-economic. Here in the conclusion the point needs to be re-emphasized. The terms of the debate were firmly set by Polanyi and his associates who proposed the typology of market and non-market society, contrasted economic exchange with socially embedded exchange, and principles of supply and demand with norms of reciprocity and redistribution. Subsequent discussions on the issue have been caught up in these formalized and false counterpositions, reproduced in recent years in the Scott-Popkin debate. Scott elaborated a general theory of the peasant committed to a moral economy predicated upon twin principles : (1) the norm of reciprocity (2) the right to subsistence. Against Scott's universal peasant aiming at subsistence, avoiding risks and insulated from the market, Popkin proposed his universal economic man, the rational actor who was for ever calculating the possibilities of maximizing income, responding to the market and undertaking risks. But we need not counterpose the economic and the sociological definition of the market, nor contrast *homo economicus* to Scott's 'moral peasant'. The economic and social cultural spheres have a more intimate relationship than most economists or cultural anthropologists are willing to recognize.

We have seen that the movement of prices and conditions of demand, internal and external, had a definite influence on production. Shifts in cropping pattern and fluctuation in area under cultivation could occur in response to these market conditions. But the choice of crops was inevitably constrained by the subsistence requirements of the peasant family and the ecology of a particular region. Production of the market coexisted with subsistence production.

Rich peasants diversified their spheres of investment over time. But choices about forms of investment were not determined by considerations of 'opportunity cost'. This is possible only within an integrated capital market, where the average profit emerges as a regulator of investment decisions, and there exists a free mobility of capital between different spheres of 'investment'. We have seen that the opportunities of investment were severely limited, and the 'capital market' was fragmented. Not only were rates of interest in the urban areas very different from rural rates, but even within the country-side rates of return from different forms of investment could vary. Given constricted opportunities, capital could not easily move from one sphere to another. Different forms of investment were not seen by rich peasants to be alternatives. These forms coexisted, and in fact complemented each other.

But calculations were not economic alone : they were moulded by social and cultural considerations. Rates of return from purchase of land declined over time. Yet land hunger was common to all classes of peasants—poor and rich. Beyond its economic worth land had social and political value : possession of land could bring power and social standing. Land hunger in this social context pushed land prices up above the capitalized value of its rental without adversely affecting demand. Similarly in the sphere of moneylending, the forms of lending and rates of interest were again influenced by the social context of rural society. Peasants preferred to lend on mortgages rather than without security, though unsecured loans yielded higher rates of return even after allowing for bad debts. The subjective evaluation of forms of investment did not correspond to their respective monetary returns. Trading and money lending might have brought higher returns but were perceived by peasants as activities essentially inferior to cultivation. For peasants, trading and lending remained important but subsidiary occupations.

In analysing lease, labour and loan transactions we have seen how they were mediated by customary norms, and social values, and affected by community ties. The market networks which developed were linked in different ways to networks of fairs and festivals.

While social values affected economic calculations, persistent long term economic pressures led to a slow change in norms of economic behaviour and social attitudes towards different forms of work and earning.

III : Another theme which runs through my thesis is that of continuity and change a recurrent one in agrarian studies in India. According to the 'old' view, British rule introduced a process of dramatic transformation of agrarian relations in India : the destruction of village communities, the dispossession of traditional zamindars, and the emergence of a class of share-croppers, tenants-at-will and agricultural labourers. Underlying this perspective of the shattering of the old society was an idealization of the past. As critics have noted, the change which followed the Permanent Settlement appears particularly dramatic when it is measured against a mythical picture of the old order with its self-sufficient non-stratified village society, absence or near absence of agricultural labourers and landless peasants, commerce and money circulation, and non-existence of usury. It has been shown that even prior to British rule agricultural labourers constituted a significant proportion of the rural population, and that the traditional menial castes continued to be the agricultural labourers of the British period. The 'old' view

that the traditional zamindars were dispossessed by a new class of urban capitalists has long since been challenged. An important recent monograph on the Permanent Settlement has again subjected this thesis to an extended critique. The Permanent Settlement, it has been argued, carried through no dramatic revolution in land rights. Changes were limited to the 'top', modifications were marginal at the 'bottom'. Even changes at the top were not as drastic as was earlier presumed. Zamindars under the Permanent Settlement acquired only titles to revenue collection and not absolute property rights. The actual rights of possession were not disturbed. In any case, change at the top was no new phenomenon : it was occurring before British rule. "This pre-modern historical process—constant change at the upper levels and imperceptible change at the village base—continued even after the Permanent Settlement." There was at most an acceleration of an existing process. In opposition to the 'old' view we thus have an argument for 'continuity'.

While the criticism of the earlier view is to a large extent valid, the thesis of 'continuity' is questionable. All changes do not possess the same significance. The composition of zamindars may not have changed after the Permanent Settlement, but their power, authority, function and the nature of their relationship to other classes within the rural order were transformed. Similarly the *taluqdars* of Oudh or *jagirdars* of Punjab could never enjoy their old power and importance under British rule.

As for agricultural labourers, we find the 'traditional' menial castes providing a large number even in Punjab. But the *sepidari* system which earlier regulated labour relations gradually changed, and the customary rights and obligations which crucially mediated the relationship between labourers and employers tended to disintegrate. Moreover, apart from the menial castes there were now a large number of 'peasant-proletarians' who depended on the combined income from cultivation and wage-labour.

It is a fact that colonial rule could not possibly impose and order which was unaffected by the heritage of the past. A study of agrarian policy demonstrates without doubt that British officials had to try and comprehend the existing social structure in India before they could formulate any agrarian policy. And the pressures of the existing social situation continued to act on the official mind necessitating continuous changes in policy formulation. But the consequence was not a 'preser-

vation' of existing rights and institutions. As we have seen, the very attempt to codify customs and rights involved issues of interpretation, and introduced changes.

At one level the issues of this debate on continuity and change are empirical. The earlier notion of 'dramatic change' was frequently based on inadequate information. Critics have inevitably presented an array of evidence of varying quality in order to counter this view. But even if all the facts are established, the issues of the debate will remain unresolved. For at a deeper level, they are linked to a theoretical problem that is of specifying what constitutes change or continuity.

Underlying my argument in this thesis are the following sets of proposition : Social institutions and properly structures once established acquire a certain rigidity and tenacity of their own and impose certain patterns on subsequent history. On the one hand they define the form through which the process of change can operate, on the other they tend to adapt and adjust to these pressures of change. Even subjected to powerful transformative impulses entrenched social institutions and relations do not simply disappear. In fact, they may retain their outward form while changing imperceptibly. Yet when one analyses the institutions and relations in their totality and in relation to their function within broader structures and systems, the aspects of change become obvious. The conserved elements do not exist as 'survivals' or 'remnants' but as integral parts of the new structure. Institutions and social relations similar in form may have differing social functions.

Changes incorporate continuities, and apparent continuities conceal changes. The point of investigation therefore is not whether there was continuity *or* change. But rather, the ways in which the two processes were interlinked and functionally related.

IV : Long term agrarian change has often been analysed solely with reference to objective economic forces ; namely, the growth of trade and markets, the movement of prices and population. Underlying these explanations has been a common acceptance of the theories of supply and demand. In a forceful critique Brenner has recently emphasized that long-term demographic and commercial trends acquire their economic significance for the distribution of income and the development of the productive forces only in connection with specific historically developed systems of social-property relations and given balances of class forces. Upto a point this critique of 'commercialization' and 'demographic' models of agrarian change is a valid one, and my own

arguments in the thesis have developed along similar lines. But here again I wish to argue against the false polarities within which the debate is trapped.

In a framework like that of Brenner, politics—the nature of class struggle and state policy—comes to the centre of the stage. Essentially such a framework counters 'economic determinism' by 'political determinism'. The processes which are termed as 'economic' and 'political' in the above argument can be logically separated, but historically they are inextricably linked, each acting upon the other.

Brenner develops his argument by demonstrating that under different property structures and balances of class forces precisely the same demographic and commercial trends yielded widely divergent economic results. But one can easily argue the converse. Merely reverse the order in which the problem is posed : with similar property structures, divergent economic and demographic trends will obviously produce varying economic results. The opportunities of accumulation or the pressures towards immiserization will vary in different economic conjunctures.

It can be argued that social property systems, the specific class structure of a particular region define the spatial variations in economic evolution. They tend to "restrict economic actors to some limited options, indeed quite specific strategies in order best to reproduce themselves." But the converse is equally true. Each economic-demographic conjuncture provides a specific context for such class struggles, conflicts over production and distribution of surplus. Every economic conjuncture offers potentialities and constraints. How these possibilities are utilized or constraints transcended depends on the specific balance of forces in the region, but classes can act within historically defined limits.

The forms and rates of rents, wages, interest, or payments for commodities purchased, as we have seen, were determined by the relative bargaining power of different social classes involved in the transaction, and not simply by the laws of supply and demand, by some inexorable logic of the market. But the class structure which conditioned the influence of the market was not established through some 'autonomous' process. By defining the terms of exchange (rents, wages, interests, prices) social classes also create the context and set the pattern of their own evolution. The process through which terms of exchange are defined is also the process of class formation. To emphasize the

centrality of 'politics' in opposition to the 'economic' or 'demographic' models of transition, is to replace one form of determinism by another. The essential point is to analyse the ways in which economic and political processes constrain and act upon each other.

V. Our study of agrarian change in Punjab indicates the historical context of the post-Independence developments in the region. Very frequently these recent developments are seen as mere products of legislation and state initiated technological revolution. Technological change and agricultural growth in the late sixties and seventies obviously can not be understood without reference to the agrarian situation and state policy in the post-colonial period, but many of the conditions for such a transformation had started developing earlier.

As we have seen, within the colonial framework a rich Jat peasantry had slowly crystallized in the Punjab countryside. Rooted in agricultural production, this class had diversified the basis of its accumulation by combining cultivation with trading, moneylending and leasing-out of land. The consolidation of this class was accompanied by the progressive weakening of the domination of merchant-moneylenders. The competition and conflict between these classes was reflected at an ideological level in the growing gulf between 'agriculturists' and 'non-agriculturists' and the formation of political associations around these identities.

State policy in the colonial period had in many ways helped strengthen the power, both economic and political, of rich 'agriculturists' vis-a-vis 'non-agriculturists' and this in turn created further pressure on the state to grant the former concessions and allow them a wider space for operation. The fact that Punjab countryside supplied a large number of recruits to the British army was always a weighty consideration behind agrarian policy. Political prudence demanded special concern for 'agricultural classes'. Once entrenched, economically and politically the rich peasantry could continue to exert pressure in the post-colonial period, influencing thereby the nature of state policy. The numerous policies which were the basis of agrarian growth in Punjab in recent decades needs to be placed in this context. There was both a pressure for certain types of state intervention as well as a social context conducive to the success of the state's developmental measures.

Having emerged from within the ranks of peasant producers, the rich Jat peasantry was quick to respond to positive state incentives to growth. Moreover, the rapid spread of High Yielding varieties and the

mechanization of peak season operations in this wheat belt of northern India can be understood better if we take into account some of the specific aspects of the labour 'market' we have studied : namely the structure of labour demand in the wheat zone (its concentration during the harvesting and threshing season, and the consequent scarcity of labour and high wages at this time) together with the general weakening of the *sepidari* and bonded labour systems, and the long term rise in wages.

Agricultural growth within the colonial framework was necessarily limited. Apart from the barriers to accumulation arising from the revenue demand for the state, there were definite technological constraints. The problem of water supply had been partly resolved in some regions and irrigation had provided one major source for the relatively higher rates of growth in Punjab agriculture compared to other provinces of British India. Yet the various efforts of the agricultural department to introduce new technology had failed, with the exception of new varieties of cotton and wheat seeds. The important point was not just to make appropriate technology available—even this was frequently not done—but to reduce the costs of production (subsidize inputs) and increase and stabilize the sale price of produce (e.g. through a policy of minimum procurement price) so as to ensure a large margin of profit. These were measures carried through by the post-colonial state, committed as it was to a programme of rapid agrarian development.

The National Movement in Malabar, 1930-47

K. Gopalankutty

Sup : Prof. K.N. Ranikkar

The present work is an attempt to analyse certain aspects of the national movement in Malabar, a District in the Madras Presidency, between the period 1930 to 1947. It seeks to analyse the ideology, organisation, the methods and techniques of mobilization and the social base of the movement. An effort is made to analyse the changes—in ideology, organisation, social base—that took place during the period under survey.

The thesis has been divided into seven chapters. In the first chapter, the social and economic condition in Malabar in the Twentieth century has been brought out. In addition to data concerning the population, of different communities, details about land tenurial structure, landlord-tenant relations and agricultural practises are brought out. Factors leading to stagnation in agricultural production, indebtedness and impoverishment of the peasantry are discussed.

The second chapter deals with the period prior to 1930. This is to provide the necessary political and historical background to the period under discussion. In this chapter, the early efforts of the nationalists, the regional disparity in extent and tempo of the movement and the major limitations of the movement are brought out as they had a bearing on the political developments during 1930 and 1934.

The Third chapter is about the Civil Disobedience Movement. Changes in ideas and concepts, propaganda efforts employed by the Congress, the techniques and methods of mobilization are brought out and the various agitations conducted during the Civil Disobedience

Movement discussed. The development of the Congress organisation is traced and the social base and the major limitations of the Civil Disobedience Movement are brought out.

The changes that took place in the realm of ideology and organisation during the period 1934-40 are dealt with in the fourth chapter. The rise into prominence of a radical wing within the Congress, their imbibing of the ideology of socialism and their efforts to propagate it, their differences with the Rightists in the Congress, the efforts of the socialists to assume leadership of the Congress, the changes in organisation that they brought about after their assumption of leadership and the widening of the social base are elucidated.

The efforts of the Socialists to organise, the workers, the peasants, the aided primary school teachers, the unemployed youth and the students form the subject matter of the fifth chapter. The details concerning working conditions, wages, demands, strikes and organisation of these different sections are presented and the features of the struggles of these various sections highlighted.

The sixth chapter is about the last phase in the national movement in Malabar. The organisational efforts of the Gandhians during 1941-42, the Individual Satyagraha and the Quit India Movement and its aftermath are discussed in this chapter. The nature of the Quit India Movement and its failure to become a mass movement are analysed. The adoption of the 'People's War' policy by the Communists and its consequences are also discussed.

In the seventh chapter, certain concluding remarks are made. In addition to a summary of the national movement in Malabar, its specificities as well as the replication in Malabar of the Nationalist politics in other parts of the country are described. In addition, certain general questions concerning the nature and character of the movement, its strategies, the relation between socialism and nationalism are posed.

In the persecution of this work, we have consulted both primary and secondary source material. The various files of the Judicial, Home, Public, Legislative, Law and Education departments containing data regarding various aspects of the movement, are available in the National Archives, New Delhi and the Tamil Nadu Archives. These have been consulted. Contemporary newspapers like the *Mathrubhumi*, *Prabhatam*, the *Congress Socialist* and the *National Front* and pamphlets collected during the field work, have also been consulted. Autobiographies and

diaries of the participants threw much light on the subjective perceptions and experiences of the freedom fighters. These are in addition to interviews with both the leaders and cadres. Of the published works, the Tenancy Commission Reports, Resettlement Reports and Census Reports provided much information regarding certain socio-economic conditions in the society of Malabar. In addition to these, secondary sources which give interpretations and analytical viewpoints regarding the various facets of the freedom struggle, both at the national and the regional level as well as the works dealing with workers and peasant struggles have been consulted.

The first of the sources consulted in the study is the diary of the participants. These diaries were written by the participants during the period of the struggle. They provide a first-hand account of the events and experiences of the struggle. The diaries are written in a simple and straightforward manner. They are written in the first person singular. They are written in a diary form. They are written in a chronological order. They are written in a simple and straightforward manner. They are written in the first person singular. They are written in a diary form. They are written in a chronological order.

The second source consulted in the study is the interview. The interview is a method of gathering information by asking questions. The interview is a method of gathering information by asking questions. The interview is a method of gathering information by asking questions. The interview is a method of gathering information by asking questions. The interview is a method of gathering information by asking questions. The interview is a method of gathering information by asking questions. The interview is a method of gathering information by asking questions. The interview is a method of gathering information by asking questions.

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Political Orientations Among Industrial Workers in Kanpur

Ranjana Tripathi

Sup: Dr. Kiran Saxena

Modern Political Scientists would agree that however varied the intellectual concerns of the discipline of political science, they all seek to understand and explain how social and political behaviour affects and is affected by the pattern of political process and political system. A political system can be described as a system consisting of interacting roles, structures and sub-systems of the underlying psychological inclinations which affect the interaction. It may be viewed as consisting of inputs either from the environment or from the system itself, inputs which may produce changes in the environment, which in turn may affect the political system. When elements of a political system, such as governmental organizations, pressure groups, voting, political parties and other social elements related to them like class and regional groups, interact with one another it is called a political process. To understand the political process we must know something of the groups which operate in this political process.

The dissatisfaction which we find among industrial workers in India concerns not only the industrialists and the government but also the common people, whose aspiration for the enjoyment of higher standards of life can be fulfilled if there is industrial peace in our country. At this stage of our progress industrial workers occupy a key position. In general economic development benefits from politically active rather than politically apathetic industrial workers. Where workers behave in an organised manner, pressure groups arise and help in the growth of democratic values and institutions. Trade unions have played a significant role in the interplay of political forces in modern societies. It is therefore, necessary to make a scientific enquiry into the political attitudes of industrial workers, the phenomenon of the growth of that class, the nature of its leadership and its political orientations. Unless workers are politically aware of the means by which they can put pressure on the government, this very important section of society can remain cut off from the mainstream of political process.

The main area of research of our thesis is to explore the ways in which industrial working class of Kannur participates in democratic socialism. What is its orientations towards political system? How do workers take part in the industrial democracy through labour unions? It is also important for us to see whether political issues are more important for them or whether economic issue dominate their attitudes and activities. The present study is therefore, in nature of a socio psychological investigation of a sample of the industrial working population of Kanpur.

Now the question arises why is it important to study political orientations of industrial workers and why ignore other sections of our society?

India is a fast developing industrial country and the industrial working class is also expanding numerically very fast. The growing numerical strength of workers is a force to reckon with in terms of political pressure. Labour carries weight because it has votes, if properly organised its voting strength can exercise great influence on the government. Workers' organisations however are monetarily much weaker than trade organisations. C. Wright Mill points out that "Power is relative, the weakness of labour is the strength of business and vice versa. But business dominates labour because money talks and business has money". The democratic strength of labour lies in making its numerical strength prevail against that of trade organisations and pressurize political parties by holding out the possibility of their own usefulness as vote banks for them. Workers' consciousness plays an important role here. There are several points in the political process which labour can use for exerting its public opinion, political parties, election campaign, legislative process and bureaucracy. All these points it can use by political participation. Only a proper political orientation can make them realise their own importance and their own position in a developing country like India.

Not only on account of its numerical strength, but also on account of its organisation and contribution to national income industrial labour occupies a very important place in the economy of the country. If industrial labour is discontented it can bring down national income by taking to strike frequently which may disrupt the industrial growth of the country.

India at this crucial stage of its economic growth can not afford frequent work stoppages and inefficiency in work. Naturally, therefore,

the study of political orientations of workers become important. Their right kind of orientations can reduce industrial friction and increase labour productivity, it can develop the kind of psychological climate in which workers may feel that they are being looked after and their contribution is being recognized.

Ashok Mehta writing in 1957, stressed the sacrifice as expected of organized labour in building a new state. In a developing country the chief problem is that of capital accumulation for further expansion of industrialization. One of the question there is therefore the question of subordination of immediate wage gains and similar considerations to the development of the country. In such a critical condition a lot of patience is expected from labour because they have to keep away temporarily their immediate demands of higher wages for the future development of the country. Here again political awareness of workers can play a crucial role.

Industrial socialism comprises one of the main pillars of India's goal of democratic socialism. An integrated fair wage and bonus policy collective bargaining and a workers participation in the management are the base on which industrial socialism stands. These pillars cannot be strengthened unless and until industrial labour is fully conscious of its role in strengthening of industrial socialism.

Democratic Socialism will also flourish in our country only if industrial labour is taking keen part in making it a success. In so far as the system can respond to newly mobilized groups or to accelerating demands, participation by the working class in main stream of political process strengthens the system and reinforces its legitimacy.

Our thesis is divided into seven chapters. Chapter I gives an introduction to the purpose of the study, the reasons for selecting Kanpur as an area of study the objective sought and the methodology used. Chapter II deals with the industrialization of Kanpur. It begins with an enquiry into the factors which initiated the process of industrialisation in the city of Kanpur and the factors which helped later into the development of Kanpur into an industrial city. As socio-economic factors make a considerable impact on political awareness Chapter III deals with the socio-economic factors and their influence on the working class of Kanpur. We made an attempt to find out how socio-economic factors like caste, religion, income, education, labour unions etc. play a role in influencing political orientations of Kanpur workers.

Chapter IV deals with how the political culture of Kanpur City has made an impact on the political awareness of industrial workers there. In this chapter various political factors like political parties, leadership, pressure groups, ideologies, political institutions etc. have been dealt with and how these factors made an impact on the political orientations of workers.

Fifth Chapter deals with the socio-economic background of the industrial workers of Kanpur. Socio-economic background of workers is derived from data collected during our field survey in which we interviewed 500 industrial workers of Kanpur.

Chapter VI deals with the political orientations of industrial workers of Kanpur towards political system. This deals with an empirical study done in Kanpur during our field research.

In Chapter VII we tried finding out how many workers of Kanpur are informed about functioning of trade unions and how much they involve themselves in trade union activities. The chapter is the conclusion of our whole thesis, the conclusion we derived at.

In the above chapters our concern has been to find out the social and economic factors influencing political orientations of the workers of Kanpur. Our objective has also been to find out the inter-relationship of the socio and economic factors and political orientations of the workers. Our study is in the nature of a socio-economic and psychological investigation related to a particular population confined to a particular time viz. 1977-78. Kanpur was decided upon as the universe, with the individuals employed in the various industrial units as a sampling unit. The total sampling design was mixed and multi-stage sampling. To elicit vital information on the original thinking of the workers, a questionnaire was drawn up on a systematic basis. In consonance with the objective of the study our hypothesis were formulated. And for testing these hypothesis the statistical tool of chi-square was used.

The result obtained from our research on Kanpur workers start from the growth of Kanpur as an industrial city itself. The growth of Kanpur city as an industrial city is linked to the rise and fall of the British Empire in India. Initiation of industrialization in Kanpur began only with initiatives of Britishers who were interested in meeting the requirement of forces stationed at Kanpur locally. The city expanded industrially the most during the two world war period. Being the industrial capital of the most populous state of India, Kanpur has got some encouragement from Government of India also. A little more

interest is required from Government of Uttar Pradesh to expand the horizons of this industrial city.

Though political system has the monopoly of coercive power in developing societies, socio-economic factors also play a very important role on any activity that takes place within the larger society. Caste, religion and education were found to be the factors which were making great impact on the political attitude of the workers. The general assumption that parochial loyalties, which are so potent in rural India tend to get blurred or break down in an industrial setting is not true.

Our study shows that workers of Kanpur are involved in the political process through their participation in political rallies and in the elections held from time to time to the UP Legislative Assembly and the Lok Sabha and they discuss political matter fairly often. However, their political participation does not go beyond that and it does not influence the formulation of public policy directly or indirectly. In the election to the Lok Sabha candidates supported by the Communist party of India and Congress have won elections almost all the times. Whereas for elections to UP Legislative Assembly Congress has always dominated the scene except for a short while when the Janta "wave" swept the whole of the Hindi speaking belt of North India. Workers are not aware of the advantage of forming a pressure group to further their own interests. Industrial workers of Kanpur are confined to the narrow economic trade unionism, which does not let them think beyond getting higher wages and bonus from trade unions. Industrial workers can fight for a better future if they realise how to involve themselves much more actively than hitherto in the political process and contribute to the establishment of an egalitarian society. Political orientations of industrial workers in Kanpur today are not consistent with a democratic socialist society.

One general feeling that is contributing to political apathy is the feeling that their political activity is futile. They can not visualise at this stage how their active participation in the political process can change the pattern of lives significantly. An awareness is yet to grow within the working class, of importance of fighting for the fulfilment of their economic demands by building up their political influence. Trade unions in Kanpur are deeply engrossed in the day-to-day problems of the workers to take note of the broader and long-term implications of their actions and policies.

It can be said that a change for the better can come in the social and economic spheres only if industrial workers are enlightened politi-

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cally about the role they have to perform in bringing about change. Once industrial workers understand their role, they can divert the course of politics in their own favour by means of the large number of votes they command. And there will perhaps be no need to go for violent revolution.

Agrarian Movements in Kerala (A Survey Research)

Jose George

Sup: Prof. K. Seshadri

History of Peasant Movements

The history of peasant revolts in Kerala can be traced back to the establishment of political authority by the British. Social and economic oppression forced people to raise their cudgels against British imperialism. Rulers like Kottayam Pazhassi Raja and Veluthampi Dalava of Travancore gave leadership in the early period. Frequent uprisings by Muslim peasants took place in Malabar between 1836 and 1921, which were basically revolts against Hindu landlords. This upsurge of Moplah peasantry provides a background for later peasant upsurges in Malabar.

The civil disobedience movement of 1930-32 and the two-month-long *Satyagraha* in 1931 at Guruvayoor—for the right of untouchables to enter the temple and worship there along with caste Hindus—heralded a new awakening of the people of Malabar on the eve of the formation of *Karshaka Sangham* (Tillers Association).

The first *Karshaka Sangham* in Kerala called *Kolacherry Karshaka Sangham* was formed in July 1935 at Kolacherry village of Taliparamba taluk. It was followed by village-level and taluk-level organisations and the formation of the All Malabar *Karshaka Sangham* in 1937. The All India Kisan Congress (later All India Kisan Sabha) formed in April 1936 was a morale-booster for the *Karshaka Sanghams* in Malabar area.

As a response to demands raised by the Malabar *Karshaka Sangham*, the Malabar Tenancy Enquiry Committee was appointed in 1939 to look into tenancy problems.

Agitations led by the *Sangham* led to head-on confrontation with British authorities in many places in the 1940-48 period. Confrontations took place in Kayyur, Karivelloor, Thillankerry, Ochiyam, Munayankunnu, Manicherry and other places.

In the forties the Karshaha Sangham movement came under the control of the Communist Party. The initiation started in 1940, with the complete transformation of the Congress Socialist Party into the Communist Party.

In 1956 the Malabar Karshaka Sangham was merged with the Travancore-Cochin Karshaka Sangham to form the Kerala Karshaka Sangham. Based on the demands of the *Kerala Karshaka Sangham* (KKS) the Kerala Agrarian Relations Bill was introduced in the Legislative Assembly in December 1957 by the Communist ministry, which came into office in March 1957.

Immediately after the passing of Agrarian Relations Bill the Communist ministry was dismissed by the central government. Later, the President of India returned the Bill without giving assent. The Karshaka Sangham had to wait until 1969 to get a comprehensive and effective land reform legislation passed in the Kerala Legislative Assembly. Even after that the Karshaka Sangham had to fight for its implementation vigorously along with other peasant organisations and agricultural labour unions. Other organisations of the peasants active in Kerala are the Kerala Karshaka Sangham sponsored by CPI, Kerala State Karshaka Congress sponsored by Congress(I) and Kerala Karshaka Federation controlled by Kerala Congress.

Agricultural Labour Unions

The 1940s witnessed a wave of unionisation of agricultural labourers in the Kuttanad region of Alleppey district, under the banner of Travancore Karshaka Thozhilali Union (TKTU). Though the agricultural labourers' union was started in Palghat in the 1950s, its dominant position was established only by the end of the 1960s with the formation of the Kerala State Karshaka Thozhilali Union (KSKTU). In Cannanore district the agricultural labour union was started only in, 1968, as a district unit of KSKTU. Unions other than KSKTU which are functioning in Alleppey, Palghat and Cannanore are the CPI-sponsored *Kerala State Karshaka Thozhilali Federation* (KSKTF) affiliated to *Bharatiya Khet Mazdoor Union* (BKMU) and the *Deseeya Karshaka Thozhilali Federation* (DKTF) sponsored by Congress(I).

In the Forefront of the Struggle for Agrarian Reforms

In 1969, during the tenure of the United Front Ministry led by E M S Namboodiripad a comprehensive Land Reforms (Amendment) Act was passed. In December 1969 the Kerala State Karshaka Thozhilali

Union (KSKTU) organised a convention of agricultural workers, hutment dwellers and peasants attended by over 2,000 delegates.

At a massive rally in Alleppey on 14th December 1969 the Union declared that

whether or not the Land Reforms (Amendment) Bill, 1969 gets the assent of the President the agricultural workers and peasants of the state will consider it as having come into force from 1 January 1970, and the hutment dwellers will *de facto* assert their rights on land as conferred by the bill.

One of the important provisions of the Land Reforms (Amendment) Act 1969 was the right given to *kudikidappukars* (hutment dwellers) entitling them to permanent ownership of their huts and between 3-10 cents of land according to its location, whether in Corporation, Municipal or Panchayat area. Under the leadership of the Kerala State Karshaka Thozhilali Union (KSKTU) the *kudikidappukars* waged a statewide struggle in 1970 and 1971, as a result of which most of them were able to get *de facto* ownership of their dwellings and small plots of land surrounding them.

Another movement which shook the agricultural sector during the 1970s was the agitation for taking over of surplus land and speedy implementation of land distribution, popularly known as "the land grab agitation". This struggle helped in exposing the government policy of succumbing to the pressures of the propertied classes and also in building political awareness among farm workers.

Socio economic Profile of Peasants and Agricultural Labourers based on Sample Survey

According to the details gathered through the sample survey seven cultivators in Cannanore and two each in Alleppey and Palghat earn less than Rs. 6,000 per year. Thirtyeight cultivators that is, a majority of the 75 cultivators fall within the income bracket of Rs. 6000 and Rs. 18,000.

The income of eight sample labour households in Alleppey, 20 in Cannanore and 25 in Palghat is less than Rs. 2,400. Twentyfour households in Alleppey, six in Cannanore and four in Palghat earn more than Rs. 4,800 per annum.

If we accept the poverty line (fixed for IRDP purposes) at Rs. 700 as per 1970-71 we can find that all the agricultural labour respondents

in our sample study are below the poverty line at Rs. 548 per annum.

Various socio-economic factors have resulted in the submergence of poor peasants and agricultural labour households into the whirlpool of indebtedness. Unless effective steps are taken by the government and other agencies, unless poor peasants and agricultural labourers themselves get organised more effectively for evolving appropriate survival strategies, they will continue to be in a very dangerous debt trap.

Struggle for Better Wages and Service Conditions

The enactment of the Kerala Agricultural Workers Act, 1974 and its implementation were major achievements of the agricultural labourers. This unique legislation in India provides for the security of employment, fixation of wages and working hours, creation of a welfare fund and establishment of a machinery for settlement of disputes. All the provisions of the Act, except the provision relating to the provident fund scheme, came into effect on 2 October 1975. After a series of agitations by the unions the Kerala Government launched the scheme for provident fund with effect from 9 August 1979 in Palghat district.

Kerala State has witnessed continuous increases in the wage rates of agricultural labour, both in money and real terms, during the last two decades. This is mainly due to organisation of agricultural labourers in militant trade unions, politicisation through series of struggles for asserting their rights, for protecting their employment opportunities against the attempts by landlords to introduce mechanisation, and for realising better wage levels and service conditions.

The owners of land and capital, particularly big owners of productive assets, have responded to the phenomenon of continuously rising wage rates of farm workers by devising strategies to cut down the number of days of employment. This is despite the fact that agricultural labour unions have successfully prevented large-scale introduction of machines such as tractors or power tillers which are aimed at replacing organised (traditional) labour by wage labour employed for operating the machines.

Minimum wages for agricultural labourers were declared in Kerala in 1957. The minimum wage rate was revised by the government several times; Rs. 1.50 for male labourer and Re. 1.00 for female labourer in 1957 to Rs. 9.20 and Rs. 7.45 respectively in 1980.

During the time of field survey all the women respondents in Alleppey get Rs. 10 per day for all agricultural operations except harvest-

ing. Men got within the Rs. 13-15 range making an average of Rs.14.11. As for Cannanore respondents, their wages vary from area to area, household to household. As a rule men get not less than Rs. 15. Sometimes in certain agricultural operations like ploughing men earn upto Rs. 25. This variation is also applicable to women. In Palghat district, wages in paddy measurement are more common. The average wage rate in kind are 5.25 and 4.62 measures of paddy for male and female labourers. The average money wages in Palghat come to Rs. 10.63 and Rs. 7.10 for males and females respectively.

Though wage rates of agricultural labour in the three villages selected for study are quite high, particularly when compared to the rates in other states in India, the total annual incomes of the agricultural labour families are pitifully low because of declining person-days of employment available in agricultural operations.

Agricultural labourers are familiar with the pension scheme initiated by the left and Democratic government in 1980. Under the scheme, which came into force from 15 May 1980, all agricultural labourers above sixty years of age, whose annual income is not more than Rs.3,600 will get a monthly pension of Rs.45.

Development Scheme and Agrarian Movements

The rural development programme adopted by the Government of India since the First Five Year Plan have been, by and large, based on west-tern models. Despite the Gandhian tradition of self-reliance, our planners have not succeeded in evolving an indigenous model of development suited to Indian reality. In this context, it is necessary to go into the philosophy and politics behind development programmes of the government. The basic defect of rural development programmes is the assumption that poverty of the rural masses can be tackled without attacking affluence, that is, without cutting at the very roots of the concentration of productive assets, particularly land, in the hands of the few.

During the field survey questions were asked and enquiries made about the extent of agricultural labour participation in rural development and the benefit they get out of it. Quite a number of people have heard about the IRDP programme, though not familiar with its technology and details. Many labourers could recollect the instances of benefits received by some persons of their locality. A large number of labourers are not aware of the National Rural Employment

Programme (NREP) and Training for Rural Youth self-Employment (TRYSM).

Organisations of Peasants and Agricultural Labourers

Kerala is one of the few states in India where agricultural labourers and marginal peasants could withstand the onslaught of the economic crisis in India to a certain extent through their organised strength. It would be significant to analyse the extent of organised strength of cultivators and agricultural labourers on the basis of the information gathered during the sample survey.

Out of the 75 cultivators interviewed for this study 45 are members, of farmers, associations the distribution for Alleppey, Cannanore and Palghat being 14, 19 and 12 respectively. Out of the 45 association members, 31 are from Kerala Karshaka sangham which is affiliated to the All India Kisan Sabha sponsored by CPI (M). Five each are from Karshaka Congress sponsored by Indian National congress (I) and Kerala Karshaka Federatiton controlled by Kerala Congress. One member in Alleppey and another in Cannanore are member of all India Kisan Sabha sponsored by the CPI.

Traditionally the Pulayas and Cherumans are the agricultural labourers. Due to unemployment and pauperisation of the peasantry, more and more people from other castes and service castes are joining the ranks of agricultural labourers. *Nairs* (a Hindu higher Caste). *Ezhavas* (one of the backward castes), Syrian Christians, Latin Christians and Muslims have joined the ranks of the agricultural labour class. This has great significance in understanding the sociological and political development in the agrarian sector.

For a proper study of the agricultural labourers it is necessary to understand the role of their unions in bringing about changes in the agrarian relations and socio-economic conditions. For instance the history of agricultural labour unions in Alleppey is the history of militant struggles under the banner of Travancore Karshaka Thozhilali Union (TKTU) which was formed as far back as 1940. TKTU is the earliest union of Kerala, probably the first in the country itself. On the other hand, Cannanore district could claim the heroic traditions of Malabar peasant struggles in 1940s and 50s. Agricultural labourers formed their separate union in Cannanore only in 1968 with the formation of Kerala State Karshaka Thozhilali Union (KSKTU). They started getting organised in Palghat as early as in 1954, but asserted

themselves as a force to be reckoned with only after the formation of KSKTU in 1968.

According to the sample study, 44 respondents in Alleppey, 41 in Cannanore and 31 in Palghat are members of trade unions. In conformity with the predominant influence of CPI (M), all respondents who are members of the union in Alleppey and Cannanore are affiliated with Kerala State Karshaka Thozhilali Union (KSKTU), sponsored by them. KSKTU is now affiliated with the All India Agricultural Workers' Union which was formed in 1981. The other unions working among agricultural labourers with some influence in the districts are Kerala State Karshaka Thozhiali Federation (KSKTF) affiliated to Bharathiya Khet Mazdoor Union sponsored by CPI and Deseeya Karshaka Thozhilali Federation sponsored by Congress (I). Out of the 31 union members from Palghat two are members of KSKTF, three of the DKTF and 26 of the KSKTU. Seventyseven per cent of the respondents are union members in Alleppey, Cannanore and Palghat put together.

Agricultural labourers built up their militant unions over long years. As a result of the earlier formation and struggles conducted by Alleppey labourers the union is more militant and politicised. Even if we go by union membership, period of joining, money contribution, participation and union identification with improvement in socio-economic and political status, Alleppey labourers are far ahead of their Cannanore and Palghat counterparts. The strength and bargaining capacity of the union in Alleppey brought a uniform pattern of wages and service conditions very much above the minimum wages declared by the government.

Politicisation and Political Participation

Traditionally, the small and marginal peasants and the agricultural labourers have been bases of strength of the Communist and other Left parties. The analysis of the political development in Kerala is therefore closely linked with the development of peasant and agricultural labour movements. An analysis of elections to the Kerala Assembly and Lok Sabha since the formation of the State in 1957 shows that the candidates of Communist parties supported by them have been elected more often to represent constituencies in Alleppey, Cannanore and Palghat districts.

Our sample survey shows that 67 cultivators out of 75, that is, 89 per cent of the total cultivators interviewed from the three villages

are associated in one way or the other with political parties. Thirtyseven of them are affiliated with Congress (I) followed by 28 affiliated to CPI (M) and two to other parties. An analysis of the caste and religionwise distribution of cultivators interviewed shows that all the Christian and Muslim cultivators who are affiliated to political parties are with the Congress (I). On the other hand, the majority of the backward caste cultivators are affiliated to CPI (M).

Among the agricultural labourers interviewed, 46 labourers in Alleppey, 48 in Cannanore and 43 in Palghat, together forming 91 per cent of the total labourers, are associated in one way or other with political parties. Out of the 46 in Alleppey only eight are members and the rest are sympathisers. The position is slightly better in Cannanore with 15 party members and 33 sympathisers. The survey in Palghat shows that there are only six party members and 37 sympathisers.

In conformity with the popularity of CPI (M) among the labourers, 77 per cent of the respondents are either members or sympathisers of CPI (M) although only 20 are party members. This low number of CPI (M) party members even among those associated with it is due to the strict norms followed by the party in giving its membership. Congress (I) takes second place with nine members and ten sympathisers. Other than the CPI (M) and Congress (I) there are two CPI sympathisers and a party member among the labourers. In order to confirm the political affiliation of the respondents questions were asked about their prime consideration in voting and the party they usually support.

Caste and Communal Equations

The important caste organisations in Kerala are *Sree Narayana Dharma Paripalana Yogam* (SNDP) of the Ezhavas, *Nair Service Society* (NSS) of the Nairs, *Pulaya Maha Sabha* of the Pulayas and *Kerala Chermar Sangham* (KCS) of the Chermars, one section of Pulayas.

The influence of communal organisations in Alleppey can be understood by the fact that all the Ezhava respondents are members of the SNDP, all Nair respondents of the NSS, and all Mannans members of *Dheevera Sabha* and eight Pulayas out of nine are in the *Pulaya Maha Sabha*. Only Christians do not have any specific organisation though they are very much influenced by the organised Church.

Unlike in Alleppey, the communal organisations have not made much headway in Cannanore and Palghat. Out of 19 Ezhava labourers from Cannanore only one person is a member of the SNDP. All the Nair labourers have nothing to do with the NSS. In Palghat only three labour respondents are members of a communal organisation, the Yadava Association.

The relatively stronger influence of communal organisations in Alleppey calls for further study. Based on the present study some tentative observations can be made at this stage.

First, Hindu communal organisations such as SNDP and NSS have had a long history in the erstwhile Travancore area where these took their origin and spread deep roots in the sociocultural milieu of Alleppey. This, however, cannot be taken as an apology for the prevalence of the communal feelings even among politically motivated agricultural labourers, particularly those belonging to communist/left/radical parties.

Secondly, the communal factor cannot be explained away without a detailed study of the ideological-political positions taken by political parties, particularly the communist/leftist parties. Whether compromises and tactical adjustments with the existing reality of communal equations had to be taken into account by parties in a political process mainly based on parliamentary elections is an interesting topic for enquiry.

Thirdly, it should be remembered that in any historical process of politicisation, there will always be lags between political consciousness/preferences and socio-cultural levels. The exact nature and extent of this gap between political and socio-cultural consciousness can be understood only through detailed and indepth studies.

Despite the existence of communal and caste feelings among agricultural labourers, as explained above, one can safely conclude that the overall trend has been one of declining communal/caste consciousness and ascendancy of secular political consciousness. One should not, at the same time, neglect temporary, cyclical upsurges in communal consciousness due to various socio-cultural and religious factors. Without understanding the changes that have taken place over the last several decades, and without a proper historical perspective, one is likely to overestimate the communal equation and underestimate the significant changes in the political arena.

Education and Role of Media

Our field surveys relating to the exposure to communication media such as films, newspapers and magazines and radios showed that out of the total of 75 sample cultivators 59 and 60 respectively read newspapers and listen to the radio regularly.

Though 50 per cent of the agricultural labourers from Kainakary village of Alleppey district and Ezhome village of Cannanore district are exposed to radios and newspapers, only 13 per cent from Palghat are used to these media. However, it does not mean that half of the agricultural labour households in Kainakary and Ezhome subscribe to newspapers and have radios in their homes. Many of them read papers and listen to radio at their neighbours' homes or the tea shops. It is a peculiar scene in the Kerala rural areas that most of the adult male members of the families in an area meet in a nearby tea shop and read, listen in and discuss current politics over a cup of morning tea. This daily exercise, coupled with the participation in day to day struggles by unions and political parties, make the Kerala agricultural labourers one of the most conscientised rural working forces in India. Eightyfour per cent of the agricultural labourers of the sample survey feel that a radical change in the existing socio-economic system is necessary to improve their conditions. The inference is that the agricultural labourers, in general, are more conscious about their socio-economic and political situation.

The high rate of literacy in Kerala is reflected among the cultivators and agricultural labourers interviewed. The survey revealed that sixtyeight per cent of the members of agricultural labour households in Kainakary village of Alleppey are literate against the Alleppey district's literacy rate of 78.52 and the State literacy rate of 70.42 (1981 Census). The literacy rate in the case of Cannanore labourers is 54 per cent against the district average of 65.74. The literacy rate of Palghat sample households is 47 against the district average of 58. However, 84 per cent of those classified in the category of "literate" persons have gone only upto primary and upper primary level, that is, below the seventh standard. Thirteen per cent have gone to the secondary school level, while three per cent could proceed to college education—which is a significant phenomenon in Kerala compared to most parts of India where agricultural labourers do not know how to read and write.

Some Emerging Trends

In the new and emerging situation of the agrarian movement in

Kerala, while the demand for fuller implementation of the existing land reform legislation still has some validity, the focus of the movement has shifted to a more complex package of issues such as fair price for agriculture produce, restrictions on the operations of the capitalist markets which adversely affect farmers, control of monopolies and multinational companies, policies of the government with regard to exports and imports, supply of inputs at subsidised prices, provision of foodgrains and essential commodities to the consumers through the public distribution system and so on.

There are regional variations in the nature, strength and tenor of the agrarian movement, depending upon the level of productive forces and the strength of the political movement. In Kuttanad, for example, the relatively high degree of development of capitalism in agriculture, has provided the material base for a militant movement of agricultural labourers in factory-like paddy fields or *padasekharams*. It may be safely asserted that agricultural labourers in Kuttanad constitute a class, a rural proletariat, both in the sense of a class "in itself" and to a large extent also a class "for itself".

However, after reaching a fairly high peak many leaders of the peasants and agricultural labour organisations are raising the basic issue of how to transcend the economic/trade union consciousness (at the level of more "economism") and develop the movement basically on political lines, using class struggle as a vehicle for revolutionary socio-economic and political transformation. At least some leading cadres of the movement are seriously thinking of new strategies for the agrarian movement, uniting agricultural labourers, poor peasants, youth and students, women and other sections of the people on broader issues of human rights and democracy.

The history of peasants and agricultural labour movements in Kerala clearly indicates that for the sustained growth of the movement the existence of a political party or parties with radical ideology and strategy for the revolutionary transformation of the society and polity is a prerequisite.

Organised small and marginal peasants and agricultural labourers in Kerala have become a powerful force to be reckoned within the politics of the State. The experience of Kerala shows that if the unorganised rural proletariat is activated through unions and militant struggles they too can play a role no less effective than that of an industrial working class. It is a matter of credit to the agrarian movement especially that of agricultural labourers that they have conducted struggles with popular support and have been able to pressurise the government to bring about radical measures in favour of the rural poor.

Politics of Education in Kerala

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Sup: Prof. C.P. Bhambhri

The study brings to light a number of interesting aspects. Various communities had to interact with the State in their struggle to establish some sort of minimal interference by the government in their educational system. This has taken various forms like launching a movement for social reform. These communities founded educational institutions where they sent their wards for education. This was the direct result of the discriminative policies of the princely governments of Travancore and Cochin, which had refused to open the educational institutions to the backward communities. Even some of the advanced communities like the Nairs were denied admission to the government run institutions. The communities like Nairs, Ezhavas, Christians and Muslims had to confront with the state on various occasions in their struggle for education. A group of educated youth emerged from these communities and they were awakened to such an extent that they started questioning casteism and their evil practices connected with it. Political independence to India brought about favourable conditions to these communities.

Apart from these the church which has taken initiative in the spread of education in the state, had to confront with the state on some occasions. The study shows that the Communist Party when it came to power in 1957 introduced an education bill which wanted to curtail the powers of the private management in order to eliminate corrupt practices which had crept into the educational system. The Communist ministry wanted to give ideological orientation to the educational system through various text books. Since the bill affected the vested interests of the private management, the church which had been running a number of educational institutions, played into a movement to overthrow the Communist government. The church joined hands with Shri Mannath Padmanabhan, a formidable Nair leader in their agitation to oust the Namboodiripad government. There were certain provisions in the Bill which had affected the vested interests of the private management. Besides these there were some other aspects, initiated by the

Communist ministry which threatened the economic interests of the Nairs.

The select committee of the Kerala Legislature concluded that the Kerala Education Bill, 1957, should not in any way affect the rights of the minorities under the articles of the Constitution, and hence, this Education Act should not apply to schools other than government schools and those aided by the government. The church in Kerala accused the government of making this Bill which, according to them, was a planned attempt to drive away the private managements from the field of education. They argued that it was contrary to the rights of the minorities as guaranteed by Article 30 of the Constitution.

This Bill had been reserved by the Governor of Karala under Article 200 of the Constitution for the Presidents assent to the Bill. While the state government was awaiting its approval by the President, an official delegation of the anti-Bill agitationists reached New Delhi was unconstitutional. Attempts were made to convince the central government of the 'unconstitutionality' of the Bill through hectic lobbying.

The President referred the Bill to the Supreme Court which ruled that Clause 33 is subject to Article 226 of the constitution and it pointed out that the right to administer school does not mean the right to administer them inefficiently. Since the State aid was given to them, the State should have statutory rights to control and supervise the schools under private management. The President of India gave his assent to the Bill and it became an Act in February 1959. The Kerala Education Bill became a subject of much heated discussion all over the State.

Arriving at the assumption that the Bill led to the mass awakening of minorities of their rights resulting in the liberation struggle that led to the ouster of the first Communist ministry in Kerala is somewhat vague. The liberation struggle witnessed the biggest mass awakening Kerala ever experienced since independence. People were mobilised on different grounds. The Bishops of the Syrian, Catholic and Marthomma churches issued instructions to their priests to preach against the Communist ministry. The Latin Catholic churches also followed suit mobilising their community against the Communists. In church premises, the priests mobilised the people by convincing them that their religious beliefs and the interests of the Christians were in peril if Communist ministry continued in power.

The liberation struggle was jointly organised by the Catholic church and the Nair Service Society along with other political parties.

It led to such a chaotic situation that Government of India was forced to dismiss the Communist ministry. The Governor of Kerala reported to the Centre that Constitutional administration in the State had broken down. On July 31, 1959, President Dr. Rajendra Prasad dismissed the Communist ministry and Kerala was placed under Presidents rule.

The Congress Party had its role to play in the development of education in the State. Before India's Independence the Congress Party in the State did not have much role to play except defending the progressive educational policy initiated by the princely government of Travancore under the Dewanship of Sir C.P. Ramaswamy Iyer. After independence the Congress Party, while it was in power, initiated a series of reforms for the upliftment of poor and the backward classes and thus ushering in a new movement in the history of the development of education. Fee concessions and scholarships were given to backward communities as a whole.

There were series of struggles by different communities particularly backward classes for the right to have access to educational institutions. The government educational institutions were practically closed to them. They formed their own caste associations. These caste associations founded schools and colleges. One of such communities was Ezhavas. One of the reasons for the advancement of Ezhavas in education in post-independent India was the work of SNDP. The organisation established a number of educational institutions and it gave stress on education because of its conviction that those who had education also had social status and economic opportunities.

Sri Narayana Guru founded Sanskrit schools and advocated his community man to take up English education, because those who received English education could easily obtain public appointments. In the beginning they started agitations which were directed to get the government schools opened to the boys and girls. The Ezhava community in Travancore achieved remarkable success in the field of education due to the efforts of SNDP Yogam. This process brought about a new order in society and politics. SNDP became very powerful and it gave rise to political influence for the middle classes in the Ezhava community. Class differentiation and class polarisation with the Ezhava community merged ahead. By the 1950s the polarisation and politicisation within the Ezhava community had advanced to such an extent that it was not possible for the ruling party to wean them away from the political line which they had adopted for their material well-being. The numerous sub-divisions with the caste were broken down; the government

administered temples were thrown open to all castes; social mobility and employment in government services increased.

The next community to struggle for education was the Nairs. The Nair Service Society was founded in 1914 by Shri Mannath Padmanabhan. The main purpose of the society was to unite the whole community under one banner, abolish "Thalickettu marriage", and to reform matrilineal system. It gave main stress on education because they thought that education would make them qualified for better posts in various institutions. This would eventually lead to the upliftment of the community in various spheres of life. The Nair Service Society pressurised the government to give them permit to open schools and colleges. As a result, the community gave birth to a number of eminent personalities in various walks of life.

The next community which tried to improve its position through education was the Muslims. The Muslims in Kerala were educationally backward compared to the rest of the communities. Available data shows that the princely government had paid some attention to the education of Muslim boys and girls, in 1914-15. Special fee concessions were granted to them. The same policy continued further. Special schools for the exclusive use of the members of the community had also been provided in certain areas and a high school had been maintained at Alleppey for the benefit of the community. There was a Muslim inspector of schools for the inspection of Arabic and Koran teaching in schools and for encouraging the spread of education among the members of the community.

The education of Muslim girls also received attention. The Muslims in Malabar were especially backward. The community also founded its own educational institutions in the State. This led to the overall development of the community. After independence they started actively participate in State politics.

Harijans also launched its movement for education. Harijans are the oldest inhabitants of the low lands of Kerala. Many of their customs resemble those of the hill tribes and their legends claim that they were once independent and lived under a Harijan king who ruled from a fort at the village of Pulayanarkota in the hills close to Trivandrum. Most of the kings suppressed different communities, particularly, non-Hindus, scheduled castes and other backward communities. This led to the gradual growth of popular movements championing the cause of the suppressed communities.

Kerala in the past was feudal in character and the casteism was tactfully introduced to maintain and stabilise the feudal society. But, it is very difficult to trace the particular time at which feudalism had crept into the society in Kerala. Society was organised on caste basis and it was a peculiar feature that each caste had its sub-divisions which were distinct from one another as to constitute almost separate castes. The high caste people had certain rights which were denied to the Harijans.

The Harijans did not have access to educational institutions. It was with great difficulty that a few Harijans in Kerala could educate themselves in preindependent India. Partly due to the pressure from the peoples movements and partly due to the persuasion from the Christian missionaries the princely government of Travancore was forced to allow priority to schemes for the deployment of education of Harijans. Sri Mulam Thirunal gave special attention to education of untouchable communities by throwing open government schools to their boys and girls. The princely government of Cochin also tried to encourage the education of the Harijans. Special scholarships and various financial concessions were introduced to attract their children to schools. A number of night schools were opened by the Cochin government as well as by private agencies. Ayyankali, the leader of the Harijans, started a few schools for the Harijans. This ushered a new movement in the history of backward classes movement in the State. A number of people from the community got education. Education changed their outlook.

Further, the study shows that even after three decades of independence and planned development, it has not been possible for the scheduled castes and scheduled tribes to improve their position as visualized by the founding fathers of the Indian Constitution. Taking all scheduled castes together almost 50 per cent still follow the traditional occupation. Generally speaking, literacy and even primary education reached the Harijans fifty to sixty years back. As a result, many parents in the above 50 years age group have primary or middle school level of education. Among the scheduled castes, pulayas have fared much better than the others.

As a whole, the conditions of the Harijans are much better. They have used education as a means and improved their social and economic conditions in post-independent Kerala. This was the outcome of the movement led by them on the one hand and the efforts made by the State and Central governments after 1947.

The Church is having a central place in education in Kerala. For the maintenance of religion, culture, and the spread of education, the Church felt the necessity of establishing their own schools. The history of education in Kerala is partly the history of the part played by the Church. The entry of the Church in this field ushered in a turning point in the history of education in Kerala in the sense that modern liberal education was introduced into the state by them.

The Church has been in the field of education in the real sense since in 1817 A.D. The Church paid a lot of attention to general education of the low castes. Schools had been established where Christians and non-Christians belonging to all classes and sections of society were admitted.

The Church could make base in Kerala due to various factors. Their work among the depressed classes brought them a lot of popularity. The Church approached the depressed classes with a philanthropic and humanitarian attitude. Due to the efforts of the Church in the educational field the large community of local Christians were making progress. Besides general education, the Church was also involved in the spread of industrial, technical and womens education. The Church also entered in the field of female education. It started a four-fold system of education with college or seminary imparting higher and technical education 'a perochial' school attached to each Church, a grammer school serving as a place of intermediate instruction and a few schools for girls. The princely government of Travancore co-operated with the Church in this endeavour.

The direct activity of the Travancore State in the field of education began in 1817 AD when Her Highness Rani Gouri Parvathi Bai issued a rescript to this effect. Soon afterwards, the government established schools in several places. The State felt that for further development of the State, the government should have control over educational institutions run by private agencies. Corruption which had crept into the management of schools under private management, particularly the Church, became one of the main reasons that forced the government to exert control over private educational institutions. Contributions were, sometimes, shown as loans and loans representing deductions from the teachers pay were shown as contributions with the explanation that these contributions were really deductions from the teachers salaries.

Under these circumstances, the government had been seriously thinking about introduction of certain fundamental reforms in the educational field. The second part of the thesis discusses the findings

of the village study. The village study seeks to examine the impact of series of movements by various communities, church, Congress Party, Communist Party and other organisations in the village. The village has witnessed a different picture. To study this, a questionnaire was framed and 100 households were interviewed. The hypothesis that, 'education leads to political consciousness, economic development, and social upliftment'. Political consciousness is regarded an aspect of political development. Political development is a vague term. However, for convenience of study and analysis, membership in political parties is regarded as a pointer to political development. Among the sample, 01.67 per cent are members of political parties and 00.33 per cent are members of trade unions. At the same time, the majority people participate in politics in one way or the other. Though they are not members of any political parties, they are very much aware of politics and problems facing the nation.

Further analysis of a microscopic minority, which has membership in political parties shows that they are all graduates but without any employment. It is considered that holding a high post in a political party can be regarded as the main key to political mobility into elite status. This clearly shows that the educated people who have no jobs are involved in active politics.

One of the important aspects which comes to light is that it is for the economic development of the individuals concerned that people participate in active politics. The study was conducted community-wise. It is found that 97.74 per cent Christians of the sample are not members of any political party but they participate in politics and 02.26 per cent are members of political parties.

The next community in the sample is the Muslims. It revealed that there is no Muslim in the sample having membership in political parties. They said that they have no interest in politics because they are actively involved in business. The data collected through the questionnaire method shows different trends. The study also reveals how education leads to economic development. For the convenience, economic development is measured in terms of an increase in real per capita income. Thus reveals that 311 individuals of the sample among Hindus are unemployed. The rest are employed in different organizations. Both employed and unemployed are educated people. They are interested in working but there are no jobs available. Those who have got jobs really improved their financial position.

A distinguishing feature of the present study is that the education system in modern India has created a surplus of university graduates in such unproductive fields as law, commercial accounting and liberal arts. All Muslims in the sample are self-employed. It is a unique phenomena. The study indicates certain tendencies. Even those who are having the same educational qualifications have various levels of income. Secondly, those who have got high qualification have high income.

It can be concluded that those who have education have high income, provided they get proper jobs. Education makes the people aware of the importance of cultural associations. The study also shows that education leads to the social status or social upliftment. Education itself has become a symbol of social status.

The Party Politics in reserved Constituencies : A case Study of Pandharpur Parliamentary Reserved Constituency for Scheduled Castes in Maharashtra

Gawarguru G N.

Sup : Dr. Kiran Saxena

The provision of reserved constituency for the Scheduled Castes form a part of the policy through which Indian Constitution wants to establish an egalitarian society in India. This provision is logically supposed to create an incentive among the Scheduled Castes to bring their political development. This system of political reservation has been in operation over a period of three decades.

This Thirty year's experience with political reservation, has been studied by some of the prominent scholars like Barbara Joshi, Marc Galanter, Satish Saberwal and Lelah Dushkin. But while studying the problem of political reservation, these scholars studied only the reserved seats, in terms of their relations with political parties and political elites. This relationship was examined, by and large, at the level of decision bodies and making very rarely at the level of reserved constituency. Therefore, these scholars choose the reserved legislators as an unit of their studies and not the interaction between the political parties and the reserved constituency.

The main focus of the present study is that it make a radical departure from the earlier studies in as much as it throws light on the following important issues.

First, What are the ideological and historical conditions that have led to the emergence of the reserved constituency in India.

Second, does the electoral alteration of reserved constituency get influenced by the electoral abuses like gerry-mandering and intentional reservation of a particular constituency ? If it does, then how and to what extent different political forces practice those abuses.

Third, the present work will also try to find that to what extent the socio-economic forces have an impact on the politics of reserved constituency.

Fourth, An attempt will also be made to discuss the social and political base and factionalism in the different political parties operating in the constituency. This would help us to understand the political attitudes of these parties towards the reserved constituency.

Finally, this study attempts to understand the political development of reserved constituency by analysing the political processes in comparative perspective. For this comparison, we are taking Solapur parliamentary reserved constituency.

Thus, the main focus of the present work is that what function that the reserved constituency, as an electoral institution, performs for the political parties? In other words, this work will try to attempt the critical assessment of the provision of reserved constituency.

The selection of Pandharpur parliamentary reserved constituency has been influenced mainly by three things.

First, the present constituency, since its inception in 1962, has been reserved for the Scheduled Castes and has been altered regularly at the preparation of every Census Report. These frequent changes in the boundaries of this constituency, provide enough ground to find out the political and technical reasons behind this regular alteration of the boundaries of the constituency.

Second, the constituency under study, seems to be experiencing an interesting kind of political development in the sense that the Congress Party has been regularly capturing the parliamentary reserved seat but at the State level some opposition parties share some of the Assembly seats with the Congress Party. This kind of uneven electoral behaviour at Assembly and Parliament level provides ground to measure the extent of participatory political process in the reserved constituency. Moreover, for comparing political process of reserved constituency with that of general constituency, we have selected Solapur Parliamentary general constituency. Solapur constituency is a neighbouring constituency and was a part of Pandharpur constituency in a framework of double member constituency before 1961.

Finally, the present constituency, which has, by and large, a rural background, has been recently undergoing the agrarian changes gene-

rated by the irrigation system. This changing pattern of agriculture, would help us to measure the impact of socio-economic changes on the political development of the Pandharpur parliamentary reserved constituency.

Data Collection

In order to test the hypotheses outlined earlier, the snowball sample method has been used for collecting the data. The data is collected through the open ending interview with the respondents derived from the political activities operating at different political levels. Data has also been collected through primary source like Election Commission Reports, Delimitation Commission Act, State and District Gazetteers and other Government Publications. Secondly sources like, books, research journals and newspaper clippings are also used for testing the hypotheses. The present study roughly covers the period from 1952 to 1985.

Findings : On the basis of the above method the present study has come out with the following findings.

In the academic circle, it is generally believed that the reservation policy in general and the reserved constituency in particular owes its origin to the British policy of 'Divide and Rule'. But the present researcher felt the need of handling the problem of the demand for the reserved constituency, from the much more comprehensive and philosophical angle. Hence in the first Chapter we have explored that the demand for reservation policy in general and the reserved electorate in particular, is originated from the historical social formation that was changing the feudal relations into the capitalist relations shadowed by the foreign capitalist imperialism in the later half of the 19th Century.

In Maharashtra, the Britishers introduced changes in the land system. These changes in agrarian system set the Depressed Classes, specially the Mahars, free from the feudal system to some extent. Later on, these depressed classes, who underwent political mobilization, made the demand for reserved electorate under the leadership of Dr. Ambedkar. The Britishers, ever ready to apply the policy of 'Divide and Rule' award the separate electorate to the Depressed Classes on communal line. Therefore, we can conclude that the demand for reserved electorate had communal reflection, but it had come-up as a part of the changing economic structure in the 19th century Maharashtra.

In the representative democratic system, the Electorate plays an important role in the pursuit of acquiring political power. But an urge for political power leads the political forces, both an individual and institutional, to practice, sometimes, electoral abuses in order to make a particular electorate safe for electoral victory. Therefore, in view of the possibility of such unhealthy practices, I felt the need of discovering such electoral abuses, their nature and extent in the Indian context with special reference to reserved constituency.

As the present study shows that the Congress Party, which is the ruling party in Maharashtra, practiced both these electoral abuses during the changes that were being brought out by the Delimitation Commission in the Boundaries of Pandharpur parliamentary reserved constituency. The method of jerry-mandering helped the Congress to maximise its electoral impact and support and diminish the support and impact of others. Our study also shows that the Congress party has also used i.e. intentional identification of a particular constituency as reserved one. According to this method the Congress identified Pandharpur Parliamentary constituency as reserved for the Scheduled Castes. This was done with the intention to render the upper Caste Opposition, both internal and external, ineffective in the constituency.

Thus, on the basis of our study of Pandharpur parliamentary reserved constituency, it can be concluded that the delimitation of the boundaries of reserved constituency is not always carried out purely on technical consideration, but these boundary changes also involve the electoral abuses like jerry-mandering and the intentional identification of a particular constituency as a reserved one. Secondly, it can also be concluded that the electoral institution like reserved constituency can perform a useful function for the political parties to acquire political power and consolidate it even at the cost of disturbing the administrative integration of the reserved constituency.

The third Chapter of the present work explores that Pandharpur parliamentary reserved constituency has been experiencing an uneven socio-economic changes. In terms of castewise distribution, except the Sangola Assembly constituency, the constituency has been dominated by the Maratha-Kunbi agricultural Community. In Sangola, it is Dhangar (Shephard) Community which is numerically dominate. The Scheduled Castes which constitute about one lakh fifty nine thousands, are widely spread over the whole of Pandharpur parliamentary constituency.

The present study shows that Pandharpur constituency is basically

rural in character and the economy of this constituency is based mainly on agriculture and agro-industries which are concentrated in Malsiras Assembly segment of Pandharpur constituency. This agro-industrial development in Malsiras constituency has a decisive impact on the politics of Pandharpur constituency. This impact of agro-industries on the politics of Pandharpur constituency is brought out in the Chapter fourth of the present work.

The present study in its fourth Chapter brings out the point that, the Congress Party in the Constituency under study, is the oldest political party and which has developed itself into a well neat political organisation with its formal party structure. It is found that this formal structure of the Congress exists all over the Pandharpur parliamentary constituency. This Chapter also reveals that the social base of the Congress lies with the Maratha-Kunbi cluster and the Scheduled Caste Community. Since, the Congress Party enjoys this social base it has been able to capture the Pandharpur parliamentary reserved seat right from the 1962 general elections.

In addition to this political support, this Chapter also shows the Congress politics in the constituency. Our study shows that the Congress leader, the Late Shri Shankarrao Mohite-Patil used this co-operative support structure against the Congress leader the late Shri Namdeo-Rao Jagtap who tried to oppose Mohite-Patil's group in the constituency. But, as our study shows, this factionalism in the Congress, was active only at Assembly elections and at times it assumes greater adverse proportion endangering the electoral prospects of its Assembly and even parliamentary candidates before 1961. But after 1962 elections, this Assembly based Congress factionalism, did not have any implication on the election victory of its Pandharpur parliamentary reserved seat. Because, it ceased to be active in Pandharpur parliamentary elections when the latter was reserved for the Scheduled Castes in 1961.

This Congress factionalism, which derives its strength from co-operative institutions, is reflected in the Congress policy of ticket distribution and at times, it assumes an ideological orientation. This was clear, when the Congress faction of Pandharpur area, led by Mohite-Patil, opposed Y.B. Chavan's policy of land reform.

Thus, it can be concluded that the Congress factional groups which are more active at the Assembly elections, do not show the same activism at the parliamentary elections of reserved constituency. While the Congress factionalism takes more efforts to mobilize the different

political forces in the Assembly elections it is found wanting, as far as mobilizing of politics forces in reserved constituencies is concerned. Since this discriminatory behaviour of Congress factionalism reserved constituency does not encourage political mobilization and partical.

Besides Congress, I have discussed Opposition Parties in Pandharpur parliamentary reserved constituency. In my study, I found that among the Opposition Parties, PWP derives its political strength from the Shephard Community and also has developed a formal party structure in the constituency. Moreover, it is also found that Peasants and Workers Party constitutes a balancing political support in Mohol and Atpadi Khanapur Assembly constituency besides Sangola. However, it has a limited political support in the constituency.

It is also clear from the discussion followed in Chapter five that among all the three HPI groups in the constituency, only Khobragade's group has developed formal Party structure in Pandharpur constituency. In terms of electoral strength, this group has an edge over the other two RPI groups. It is clear from our study that all these RPI groups do not have an effective political base in the constituency and hence are unable to pose any serious electoral challenge to the Congress Party in the constituency our study also brings forth the point that all these three groups of RPI do not carry out continuous political activities in the constituency except during the election times. It is also clear from our study that all the three RPI groups have the crisis of loyalty from their respective leaders who are supposed to be functioning in Pandharpur constituency. These leaders and candidates have very often revolted against the State units of their RPI groups and are found joining hands with either the Congress (I) or PWP. Thus, all these groups are seriously affected with factionalism.

Thus, it can be concluded that, the lack of continuous political activities and political resources lead the RPI groups to depend on the political patronage of the dominant parties in the region. This tendency of dependence suspends the changes of generating competitive politics in the constituency and consequently arrest the growth of political development among the Scheduled Castes. Secondly, it can also be concluded that the Scheduled Castes are unable to utilize the provision of reserved constituency for building up a solid party organisations. Because for building up such organisations, one should have material resource and political activism which the Scheduled Castes in Pandharpur reserved constituency lack.

Final Chapter of the present study explores that the political mobility achieved by the Scheduled Castes through reserved constituency, is a sponsored mobility as explained in the beginning of this chapter. This mobility is sponsored by the political parties especially the Congress (I) and Congress (S). Upper Caste powerful lobby which decide, unilaterally, the nomination of the reserved candidates, and Scheduled Caste Community has no say in it.

It is also clear from our study that once these Scheduled Caste candidates are sponsored by these Parties (especially the Congress-I) they cannot switch over to contest mobility as defined in the beginning. Because in the subsequent period of political career of these Scheduled caste leaders, the sponsored mobility would adversely affect their ability to create any factional base within the Congress Party or in their own Community. This sponsored mobility also tends to mould the rebellious behaviour which these Scheduled Caste Congress leaders assume occasionally. T.H. Sonawane's case in the present study endorses this proposition.

It is also clear from our study of political processes in Pandharpur reserved constituency that the nomination process in reserved constituency is less participatory than the general constituency. The Congress or the Congress (S), while nominating the Schedule Caste Candidates for Pandharpur parliamentary reserved constituency, do not have any competition either from the Scheduled Castes within the Party or from the Scheduled Caste Community in the constituency. To assess the extent of participatory political process in Pandharpur reserved constituency, I compared this constituency with Solapur parliamentary general constituency and found a very wide gap in the political participation of the people in both the constituencies.

In Solapur parliamentary general constituency, the nomination process in the political parties, specially the Congress involves many inter-party competing groups. Similarly, the opposition parties are also found not actively participating in the nomination process of Pandharpur reserved constituency. As it is clear from our study, opposition parties only support the Pandharpur non-Congress reserved candidate. However, this support is influenced by the political considerations of these opposition parties, which extend this support as long as it is conducive to improve their electoral prospects in subsequent elections.

In terms of press coverage, election campaign and voting trends, our study shows that the political process in general parliamentary

constituency receives much greater importance than the reserved constituency. This happens because these parties concentrate more on the election processes of the general assembly segments of Pandharpur reserved constituency and the election process in Solapur general constituency. Thus, it can be concluded that political parties keep low political profile in reserved constituency. This kind of political orientation towards the reserved constituency arrests the political development and growth of reserved constituency.

It can be concluded that the provision of reserved constituency meant for the Scheduled Caste's political development, does not lead them to create a clout for the political development of the Scheduled Caste community as a whole. While this provision helps a few Scheduled Caste legislators to get political benefits, but at the same time this provision is not sufficient to encourage an institutionalised political participation among the Scheduled Castes. Our study shows that socio-economic sources operating in the constituency play an important role in the development of well organised political network. Since the Scheduled Castes in Pandharpur reserved constituency lack these sources they are unable to create any effective political network in the constituency.

On the contrary, as our study shows that this provision is very much subservient to the political interests of the political parties dominated by the elites from the dominant castes who have socio-economic resources. These elites are found making use of the reserved constituency as an institutional device to protect their interests rather than the interests of the Scheduled Caste community as a whole. Hence our study differs from Barbara Joshi who holds the view that the provision of reserved constituency serves the interests of the Scheduled Castes.

It can also be concluded from our study that the lack of economic and educational sources forces the Scheduled Caste politicians to depend on the dominant castes who control these resources. Our study shows that this state and political dependence on these dominant castes can not be reduced by the provision of reserved constituency alone. On the contrary, this provision perpetuates this dependency among the Scheduled Caste legislators, who may assume an autonomous political posture within the dominant parties. But they can not do so, because they are coopted in the opportunity structure of the dominant parties specially the ruling party. Thus, their political mobility is conditioned by the political patronage given by the dominant parties. This political patronage in return, makes the Scheduled Castes legislators more responsible

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to the party they represent and less responsible to the community they belong.

Therefore, to reduce this state of political dependence, the socio-economic conditions of the Scheduled Castes should be improved. Then only they will be able to develop a corporate political identity which once was visualised by the constitution makers while they incorporated this provision of reserved constituency in the Indian Constitution.

Police Administration in the Context of Development : A Case Study of West Bengal, 1951-1971

Kalyani Saha

Sup : Prof. S.N. Jha

Police administration plays a prominent part in the process of development. As a part of civil administration the police are entrusted with the duty of preserving law and order, preventing and detecting crime, and enforcing laws. In performing these functions the police organization interacts with life, liberty, and property of the individual and the community. The traditional roles of the police organization are added with new functions pertaining to development administration. No longer are the police duties restricted only to regulatory administration. Its function of maintaining law and order sustains and strengthens democratic institutions and processes. It contributes to economic growth by executing laws related to the economic policy of the government. It maintains harmonious industrial relations and agrarian peace, by resolving conflicts and dealing with cases involving communal violence. The police organization participates in the development process by regulating economic offences like smuggling, hoarding, etc. and providing protection to individual property, industrial organization, railways, border security, port security, and traffic regulation. It also participates in the process of implementation of social legislation specially the laws enacted for the backward castes and communities. The role of creating political stability, industrial security and social mobility helps the processes of democratisation, industrialisation and modernization. Thus the police organization "determines whether development will prosper".

The process of socio-economic and political growth brings about considerable change in society. Changes pertaining to development over a period of time can be classified as follows :

- (a) Economic development : (i) growth of industries and workers; (ii) agricultural advancement ; (iii) development of towns, roads, banks, cooperative societies, etc.

- (b) Social development : (i) growth of literacy and educational institutions ; and (ii) increase in medical institutions and improvement in health facilities.
- (c) Political development : increased political activity characterized by participation in elections, growth of parties, and contest for votes between them.
- (d) Increase of migrants from other states and from beyond India. Changes in the aforesaid components of development affect not only the members of the community but also the apparatus of police administration. Growth in these indicators of development increases the volume of crime and thereby affects the functions of the police organization. Based on these assumptions the basic hypotheses are derived :
 - (1) With development there is increase in crime.
 - (2) Given the above condition, work load increases without any proportionate increase in police strength, establishment and expenditure.

Both the hypotheses have been related to a study of statistical data from all the districts of West Bengal (excluding Calcutta) for the years 1951, 1961, and 1971, pertaining to development (forty-three variables), crime (eight variables), and police resources (eight variables). It focuses on the process of development, the volume of crime and the police organization in order to highlight the changes and components of development affecting crime and the police organization.

The methodology of this work is based on two types of algebraic computerized models, viz. (i) factor analysis, and (ii) multiple regression analysis. The technique of factor analysis has two parts. The first part showing the factor loads differentiates the significant development, police and crime variables and shows the relationship between these three aspects. The second part gives the rank and position of each district by means of factor scores. We have carried on factor analysis at two levels. At the first level it consists of separate results for infrastructure, health and education, workers and industries, agriculture, migration, political participation and crime. The factor scores for each indicator of development and crime are used to calculate the rank correlation between them. At the second level we have used the technique of factor analysis for all the fifty-nine variables to examine the overall relationship between development, crime and police variables and rank of each district according to the set pattern.

We have applied the technique of multiple regression analysis to show which are the components of development affecting (i) the volume of crime ; (ii) police strength ; (iii) police establishment ; and (iv) police expenditure. This has been worked out in nine groups. It consists of eight police variables and one crime variable which are dependent. The independent development variables which affect the above-mentioned variable are forty-three, divided into six groups.

The study has been presented in seven chapters. The theoretical perspective, hypothesis, methods, source of data, scope, and plan of the thesis have been dealt within the first chapter. The concept of development, in the light of the views of different authors and the indicators of the three components of development—economic, social, and political—are given in the second chapter. Here, the developmental status of each district in West Bengal for the years 1951, 1961 and 1971 has been measured in terms of forty-two variables. The factor scores and the composite index show the position of each district in respect of infrastructure, health and education, workers and industries, agriculture, political participation, and migration for three time periods. It has been observed that the ranks for the most developed and underdeveloped district is more or less same in the respective indicators. Thus the districts of Howrah, Hooghly and 24-Parganas are the most developed and West Dinajpur and Purulia are the least developed in respect of the six indicators. The position of the other districts has varied in the different components of development for the time periods under study. In the third chapter, the interrelationship between development and crime has been established by both multiple regression analysis and factor analysis. The factor scores of crime are very high for districts that are more developed in respect of defined indicators of development except the variables pertaining to agriculture which do not show any effect on crime. The reverse relation can be found in the least developed districts. The impact of urbanization on crime has also been shown by multiple regression analysis. Total cognizable crime per 10,000 people is affected by the variables indicating urbanization, viz urban population and towns. A comparison of the factor scores for crime and infrastructure, workers and industries, political participation, and migration shows the scores of the first group of districts—Howrah, Hooghly and 24-Parganas—to be very high and those of the third group of districts—West Dinajpur and Purulia—to be very low. It is difficult to see this relation in the second group of districts consisting of Burdwan, Birbhum, Bankura, Midnapore, Nadia, Murshidabad, Malda, Jalpaiguri, Darjeeling and Cooch-Bihar. However, it is generalized with the example of developed and under-developed districts that with the abovementioned

indicators of development the volume of crime increases. To an extent, this argument gets substantiated by the results of rank correlation. Infrastructure for all the abovementioned years, workers and industries, health and education for the year 1951, political participation for the years 1951 and 1961, and migration for the year 1971 have concordance with the ranks of crime. Thus, the volume of crime increases with urbanization, industrialization, improved infrastructure and increase of political participants and migrants.

The history of the police organization, its structure, its strength, and its costs are studied in the fourth chapter. It reviews the police organization in the context of development and the rising volume of crime and finds that the allotted police strength, territorial units, and expenditure in the districts of West Bengal are inadequate. In respect to area and population it is found that only the district of Howrah followed by Darjeeling and Hooghly has better distribution of subdivisions and police stations. The ratio of civil police and district armed police to area and population is higher in the districts of Howrah, Hooghly, 24-Parganas and Darjeeling than in the districts of Burdwan, Nadia, Murshidabad and Cooch-Bihar. It is lowest in rest of the districts of West Bengal. Over the three decades (1951-71) the strength of district armed police has increased in all the districts whereas in respect of strength of civil police it has decreased by the year 1971. Compared to the years 1951 and 1971 it was high only for the year 1961. The allocations of police budget from the year 1951 to 1971 have also been increased. It is found that police expenditure is highest in the developed districts. In respect of cost per policeman, cost per citizen, and cost in respect to area, better policing is only achieved in Howrah, 24-Parganas and Hooghly.

Taking a comparative account of the ranks given by the composite index of factor scores for the developed and underdeveloped districts in respect of development and crime it is found that these districts also have their respective high and low ratios of police strength, expenditure and its establishment. Thus in the developed districts of Howrah, Hooghly and 24-Parganas there is more volume of crime, police-strength, police subdivisions, police stations and expenditure. Similarly, it is less in the underdeveloped districts of West Dinajpur and Purulia. This emerging pattern of relation between development, crime and police resources has been studied in the sixth chapter by the second set of factor analysis with 59 variables, which establishes the hypothesis : (1) with development crime will increase, (2) with such increase in crime accompanied by development there should be proportionate increase of police strength and resources.

The theme of the thesis, viz. the impact of development on police strength, establishment, and expenditure, is statistically set out in the fifth chapter. Through the statistical method of multiple regression the association of development variables with the following police variables is established : (i) Number of policeman per 100 square ki'lometres ; (ii) number of police stations per 100 square kilometres ; (iii) strength of the civil police per 10,000 people ; (iv) civil police as a percentage of the total police ; and (v) expenditure on police administration per 10,000 people. The foregoing analysis shows the requirement of reconsidering the development variables in determining the yardsticks of allocation of police-strength, establishment and expenditure rather than considering only area, population and crime. It is also essential to include the following developmental variables while taking the factor of area : (1) density of population, (2) percentage of urban population, (3) electrified villages, (4) number of medical and educational institutions, (5) number of towns, cooperative societies, banks, (6) density of roads, (7) agricultural production and productive conditions, (8) workers and industries, (9) migrants, and (10) political participants. The ratio in terms of which such allocation can be done has to be further studied and then determined. However, incorporation of developmental factors in the yardsticks for the allocation of the resources mentioned earlier is essential because the developmental status of the environment in which the police structure functions affects the volume of crime and the workload of the organization.

In West Bengal the police organization needs to be reorganized in the context of development. The police strength, establishment, and expenditure has to be re-allocated in terms of the workload, developmental status of the area, and volume of crime. Changes in the Police Act 1861 and Police Manuals are to be considered for better management. Further, with proper training and modern equipments and techniques the organization will be able to give better service to the people. Its public image will improve and there will be added efficiency in the maintenance of law and order and prevention and detection of crime.

Structure of Manufacturing Industries in India : A District Level Analysis of Labour Force and Establishments 1901—1971

Indu Khurana

Sup : Dr. Atiya Habeeb

It is a well established thesis that economic progress and industrial development are closely linked. The low level of national income in India and the corresponding low standards of living can partly be ascribed to its failure in building up a strong industrial sector. During the period 1901-1971, the relative share of industrial workforce has increased only marginally from 10.46 per cent to 10.51 per cent. This is indicative of the inability of this key sector to absorb both the backlog of the unemployed workforce and the rapid increases of population in the working age group. The weakness of this sector is also indicated by the small share it has in the net domestic product, which was only 13.3 per cent in 1969-70.

The present study is an attempt to highlight some of the structural characteristics of the industrial sector of the Indian economy in terms of their spatial and temporal dimensions. The aim, in this study, is to move a step beyond the existing studies by (a) using the district and not larger units as done by other researchers for temporal and spatial analysis, and (b) by employing the three digit industrial classification available in the Indian Censuses instead of the broad categories used in most studies.

The study evolves around four focal themes which are considered crucial to the understanding of the industrial structure of the country. These are the analytical framework for the analysis of industrial development in the pre and post-independence periods, the spatial and temporal dimensions of the patterns of industrialization; the structural components of manufacturing activity and the characteristics of industrial units.

The analysis covers the entire country and uses Census data for workforce and establishments at the district level. The period under consideration is from 1901 to 1971.

Analytical Framework

The process of industrial development of a country is part of the prevalent economic system and should, therefore, be analyzed within the framework of this system. These systems differ between developed and underdeveloped countries and in different politico-economic situations. Under each of these conditions some of the strategic factors which effect economic development and concomitantly industrial development are the roles played by production and circulation (merchant/finance) capital and the ways in which economic surplus is extracted, consumed, utilized or reutilized.

The disparities in industrial development between developed and underdeveloped countries can be explained by the historical evolution of industrial capitalism, and the relationship which evolved between merchant and industrial capital as they operated in the sphere of industrial development. In the developed countries of today, production capital dislodged merchant capital from its dominant position. This was the result of increasing productivity which lead to an accumulation of funds. These factors, combined with the rise of modern banking, reduced the importance of merchant capital which gradually began to play the role of an agent of industrial capital securing for it cheaper raw materials and overseas markets for its products.

In underdeveloped countries, especially those which have been in a colonial relationship with a metropolitan power, merchant capital dominated because of the needs of the industrial capital at the metropole. It played an intermediary role between the pre-capitalist 'periphery' and the capitalist 'centre'. Merchant capital hindered the growth of production capital. It subordinated production capital in the periphery to its own interests which now revolved around the production and sale of exportable commodities and did not attempt to increase labour productivity. In addition, merchant capital thwarted the development of a native capitalist class.

Although some modern manufacturing especially the production of cotton textiles, sugar and other industries based on the processing of agricultural commodities had begun before the First World War in the larger Third World countries, import substitution began only in the inter-war period. In the early phase the emphasis was on consumer goods. This has often been called the easier phase because the underdeveloped countries have ready markets for such products and the equipment and technology is available easily. The second stage of import substitution which involves the production of capital goods is

considered the more difficult phase and has normally been accompanied by the resurgence of metropolitan capital. In this stage the Third World countries usually find themselves in a situation where further industrial expansion involves collaboration and the entry of Multinational Corporations. Merchant capital is replaced by metropolitan industrial capital which now controls industrial development in the Third World countries by a more or less complete monopoly of technology and markets. Hence large parts of the surplus value is siphoned off as technical fees, royalties etc. and the diffusion of technology is limited.

A brief historical review of the process of industrialization in India would illustrate some of the broad generalizations just made about the underdeveloped countries. The metropolitan economy imposed upon India a series of policies which opened up the Indian market to British goods and lead to the progressive decline of traditional industry. Before the First World war the only two industries of importance were cotton and jute. During this period, European investment was dominant, especially in Calcutta. The cotton textile industry in Bombay was, however, mainly controlled by Indians. The political-economic situation which prevailed after the First World War, however, necessitated the establishment of some industries in the colonies.

After independence, industrialization took place under heavy protection and import controls with large scale government investment in highrisk sectors which aimed at letting the private sector take advantage of these investments and protectionist policies. However, producer goods industries, which were normally launched by the state have been impeded in their growth by supply and demand bottlenecks, and 'import-substitution' has occurred in the most profitable sectors, i.e. those which manufacture luxury goods and ironically have higher import requirements. As a result of these factors the country's indebtedness has increased considerably and the second and Third Plan periods have been characterised by heavy inflows of foreign aid. This has also been accompanied by increased technological dependence.

Within this framework, the following hypotheses can be formulated :

1. The process of industrialization in India has been weak as manifested in its inability to increase its share in the work-force.
2. Industrial activity is distributed desparately in space and tends to be concentrated in a few areas.

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3. The industrial structure is characterised by the dominance of consumer oriented branches of industries.
4. The growth of the industrial sector has largely been due to the multiplication of small-scale units rather than by the development of the large-scale corporate sector.
5. The level of technology used in industrial production has been by and large low and the process of modernization has been weak.

Some of these hypothesis have already been researched into and verified from different perspectives. It should be reiterated here that the aim in this thesis is not to arrive at new startling conclusions about the industrial structure in India but to buttress the existing studies with a more in-depth analysis of the available data at the micro level.

The Time Period

The time period under consideration is from 1901 to 1971. Data has, however, been collected for three points of time, namely, 1901, 1931 and 1971 for industrial workforce and for four points of time, namely, 1911, 1921, 1961 and 1971 for establishment's.

Data Base

As started earlier, the district has been chosen as the analytical unit and data pertaining to two variables, namely, industrial workforce and industrial establishments has been collected and analysed. The tables from which data for workers is taken are available in the provincial volumes for each of the census years chosen for this study. These tables are numbered and labelled as follows: (i) Census of 1901 — Table XV "Occupation or means of livelihood, figures for actual workers", Class D; "Preparation and supply of material substances" gives the data for manufacturing. This class has 11 orders, 37 sub-orders and 316 groups (ii) Census of 1931 — Table X — "Occupation on means of livelihood", data for "earners" plus "working dependents". Class 8: "Preparation and supply of Material substances". Sub-class III — "industry" gives the data for manufacturing and is divided into 8 orders and 59 groups. (iii) Census of 1971 — Table BIV Part A — "Industrial classification of persons at work other than cultivation as main activity by divisions, major groups and minor groups", Divisions 2 and 3: "manufacturing and repair" give this data and are divided into 20 major groups and 176 minor groups. We have restricted our analysis to the male workers only because data for the female workforce is

considered relatively unreliable and is generally not used for inter-census comparisons.

Data for establishments was obtained from the provincial censuses from the following tables : Census of 1911 — Table XVE : "Statistics of Industries", Part I — "Provincial summary" and Part II : "Details by districts", (ii) Census of 1921 — Table XXII — "Industrial Statistics", Part I — "Provincial Summary": and Part II — "Details by districts" and Part VI — Details of power used. Data for 1911 and 1921 is available only at the province level and not the district level for power used and size of establishments. At the district level only the total number of establishments were reported; (iii) Census of 1961 — Table E — III : "Census Houses used as factories and workshops classified by industry, power used and size of employment" (iv) Census of 1971 — Table E — II Part B : "Distribution of manufacturing, processing or servicing establishments other than household industries classified by industry, fuel/power or manual used and size of employment"; and Table E - II Part C "Distribution of household industry establishments by industry, fuel/power used and size of employment.

Methodology

In order to increase the degree of comparability of data, several adjustments had to be made pertaining to the total number of workers and the workers included within the industrial sector. In order to make the total number of workers comparable the 1971 census has been taken as the base and the census of 1901 and census of 1931 have been adjusted accordingly. Three statistical methods have been used to analyse the distribution of workers :

- (i) Relative share in terms of percentages. For each district percentages have been calculated for (a) workers engaged in manufacturing to the total number of workers and (b) workers engaged in each type of manufacturing activity to the total workers in manufacturing. This data has also been quartiled and mapped.
- (ii) Location Quotients. For each district location quotients have been calculated for (a) the total workers in manufacturing activity and (b) the workers engaged in each type of manufacturing activity.
- (iii) Spatial Lorenz Curves and Indices of concentration. Data was aggregated at the provincial level and spatial Lorenz

curves have been drawn. In conjunction with this, indices of concentration have also been calculated.

In the case of industrial establishments data for three attributes has been examined, namely, spatial distribution, size structure and power used. In order to examine the spatial distribution for each district the percentage shares of industrial establishments to the total industrial establishments in the country have been calculated for 1911, 1921, 1961 and 1971.

The size structure of the industrial establishments has been examined by grouping them into four categories on the basis of number of workers employed by them (a) small establishments employing 1-19 persons; (b) medium sized establishments employing 20-49 persons; (c) large sized establishments employing 50-99 persons and (d) very large establishments employing 100 or more persons. For each year, the percentage share of industrial establishments in each of these size categories (in each province in 1911 and 1921 and in each district in 1961 and 1971) have been calculated. In 1961 establishments whose size category was not stated have been included under small establishments as recommended in the Report on Industrial Establishments, 1961. In 1971, the same method of categorization was used.

Power use has been examined by calculating the percentage shares of establishments using power to total establishments in each province/district. Further the types of power have been examined on the basis of categories given in the Census of India, 1971 : (a) electricity, (b) liquid fuel; (c) coal, wood, bagasse; and (d) "other power". The percentage shares of each of these categories to the total number of power using establishments have been calculated.

Organization of the study

This study is organised in seven chapters. In the first chapter the major themes in the thesis have been introduced; the related literature has been reviewed and an analytical framework has been formulated. The basic hypothesis to be verified in this study have subsequently been proposed. The reasons for the choice of the time period in this study have also been outlined and the data base and the methodology used have been discussed.

Various theories of industrial location have been discussed in Chapter II. In this chapter international patterns of industrial location and temporal changes in these patterns have also been examined.

The spatial distribution of workers in manufacturing and changes in this distribution between 1901 and 1971 are analysed in Chapter III. In order to do this the proportions of industrial workers to total workers in each district in 1901, 1931 and 1971 are calculated and the variations that emerge have been examined.

The industrial structure of the country has been analysed in terms of the types of industries in Chapter IV and V. In Chapter IV the industries have been grouped according to the two-digit classification available in the Indian Censuses. In Chapter V another classification, considered more pertinent to the understanding of the relationship between the process of industrialization and economic development has been attempted. This consists of categorizing industries into capital, intermediate and consumer and transport equipment.

The basic characteristics of industrial establishments are outlined in Chapter VI in terms of their spatial distribution, size structure and the type of power they use. Changes in these characteristics between 1901 and 1971 have also been analysed by examining data for 1911, 1921, 1961 and 1971.

The conclusions of the thesis are presented in Chapter VII.

Conclusions

The following conclusions are drawn from the analysis in this study—

1. The process of industrialization in India at the turn of the present century was weak as manifested by the insignificant share of this sector in the total workforce of the country. This proportion has increased very negligibly during the ensuing decades of the century. This inability of the industrial sector to increase its share in the workforce is indicative of the fact that this weakness has persisted.
2. A district level spatial analysis of industrial workers reveals that during the decades between 1901 and 1971 industrial activity was not only insignificant in large parts of the country where the proportion of industrial workers remained very small but also that the spatial pattern of manufacturing did not show any significant change.
3. In terms of spatial distribution of industrial workers, areas with a relatively large share of the industrial workforce in 1901 were the four districts with the metropolitan cities of

Bombay, Calcutta, Madras and Delhi, some of the Princely states and a few scattered districts. Areas where manufacturing activity was less significant included the North-Eastern region, northern Bengal, northern Bihar, northern Uttar Pradesh and most of the districts in the south-western part of the Bombay Presidency. In 1971 there was little change in this spatial structure except for the emergence of some new areas of industrial activity and the decline of certain others. The metropolitan centres along with other pockets of industrial activity expanded to form regions of industrial progress in 1971. These regions were — (i) The Bombay-Gujarat Region; (ii) The Calcutta Region; (iii) The Madras-Bangalore-Kerala Region ; and (iv) The Delhi-Punjab Region. Another important area which emerged in 1971 was the Chhota Nagpur region.

4. The shares of some of the older established industries namely, textiles, wood products and leather and leather products, have registered a decline in the total industrial workforce during the period under consideration. Textiles have, however, continued to have the largest share in the total workforce engaged in manufacturing activity.
5. There has been an appreciable diversification of industries during the period under consideration. Relatively newer industries, like paper and allied products, chemicals and chemical products, basic metals and transport equipment have increased their share in the total labour force engaged in manufacturing activity between 1901 and 1971. Their shares, however, are still negligible compared to the shares of the traditional industries.
6. An analysis of the spatial distribution of the labour force engaged in manufacturing indicates that textiles are the most dispersed group of industries. Wood products, non-metallic mineral products and basic metals also exhibit a tendency towards dispersion. On the other hand, petroleum and coal products, rubber and plastics and their products and transport equipment are the most concentrated. The index of concentration has, however, decreased in the case of petroleum and coal products and transport equipment during the decades under consideration. In 1901, paper products had a tendency towards concentration but in 1971 they exhibited a dispersed pattern. Food products, chemicals and leather products do

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not show any marked tendency towards concentration or dispersion.

7. Consumer goods industries have had the largest share in the industrial workforce. Intermediate goods industries have been next in importance.
8. The proportion of workers employed in the manufacture of capital goods though small, has increased appreciably between 1901 and 1971.
9. The share of workers engaged in the manufacture of intermediate goods has registered a decline between 1901 and 1971. This decline was, however, marginal.
10. In 1971 areas which had relatively high shares of their workforce employed in the production of capital goods were (i) The Punjab; (ii) Southern Parts of Bihar and Bengal areas; (iii) isolated districts in Tamilnadu; and (iv) southern and western parts of Maharashtra and Gujarat.
11. Areas with a relatively high proportion of their workforce in capital goods industries were also the areas where the proportion of workers engaged in the total manufacturing activity was large.
12. Capital goods industries exhibit the highest level of concentration. There has, however, been an appreciable decrease in their index of concentration during the period 1901-1971. The intermediate goods industries are more widely dispersed. However, historically, the most widely dispersed groups of industries have been the consumer goods industries.
13. Industrial establishments in India show a tendency towards concentration as is evident from the fact that a very small proportion of districts accounted for a relatively large share of the country's establishments. Nearly 4 per cent of the districts in 1961 and about 3 per cent of the districts in 1971 had more than 1 per cent of the country's establishments.
14. The majority of industrial establishments in India are small and in 1961 and 1971 they accounted for more than 99 per cent of total establishments in almost all the districts.
15. Large and very large establishments account for a negligible proportion of the total establishments and even as late as 1971

only about 0.50 per cent of the total industrial establishments were in this category.

16. Industrial technology in India has undergone little change as is evident from the fact that even in 1971 only a third of all establishments used power.
17. Solid fuels are the most important sources of energy, but their importance decreases with distance from the main coal producing belt of the sub-continent. In addition their importance has decreased during the period under consideration.
18. Electricity is gaining in importance as a source of energy and it was utilised by as many as a third of all units in 1971.

The policy implications of these conclusions are important and it is hoped that this analysis would provide a backdrop for more detailed regional studies which will examine the relationship between the existing structure of the local industries and the other parameters of the regional economies.

Low and Declining Sex Ratio in India (1901-71): Towards an Explanatory Framework

Ilina Sen

Sup: Prof. Asok Mitra

The central concern of this work is the low and steadily declining proportion of women to men in India as revealed by census data between 1901 and 1971. Not only is the Indian sex ratio (defined as females in the population per 1000 males) among the lowest in the world, its levels have been lower and lower in each successive census in the first seventy years of this century.

In a relatively closed population like India, sex ratio is unlikely to be affected to a significant extent by migration. Earlier studies of the sex ratio in India, most notably the authoritative work by Dr Pravin Visaria, had firmly rejected as possible causes for this phenomenon factors like underenumeration, or inherent biological aberration. Visaria's research had demonstrated that the only plausible explanation for India's low sex ratio was a mortality pattern that was exceptionally unfavourable to women. He attributed this to cultural factors. While he did not carry out his researches beyond this, the present work really takes off from there, and seeks to understand the factors lying behind this mortality pattern.

A comprehensive survey of work already done on the sex ratio establishes both the extent of our present knowledge on the subject, as well gaps that remain therein. This is followed by a review of some of the evidence relating to a highly female selective mortality pattern—evidence from the seventies, that was not available to Visaria when he wrote, and evidence that really clinches the case. Evidence of male female differentials in nutrition and health care is evaluated, as is available evidence on women's role as workers, and on women's social position. The purpose here is to identify key questions and issues around which to direct our enquiry regarding excessive female mortality and low and declining proportions of women in the population.

This stock taking is followed by a detailed mapping of the sex ratio at district level, something that has not, till now, been attempted. This mapping is done for each decade from 1091 to 1971. This exercise enables us to identify areas of high, moderate, and low sex ratio, as well as to observe secular changes in each category. We find that the sex ratio forms its own regional patterns on the map that cuts across ecological or state boundaries. We note that decline in sex ratio has taken place over almost the entire country, although the rate of decline in different areas and different decades has not been uniform. Certain areas where sex ratio has improved during the century are also marked out. It becomes clear that there is no one to one correspondence between current (1971) levels of high or low sex ratio, and secular patterns of high or low decline or improvement. An attempt is made to superimpose magnitude of decline or improvement on current levels and to categorize the districts of India into one out of sixteen categories of like range and behaviour of sex ratio.

A brief analysis of age specific sex ratios in the districts where the secular decline in sex ratio has been highest, reveals that heavy female mortality in childhood and reproductive ages is indicated in these districts. The next part of the enquiry consists in testing, within the regional framework already developed, whether we can statistically determine any causal relationships between the sex ratio and the socio economic characteristics of individual districts and their populations. For this purpose, a series of correlation matrices are constructed and stepwise regressions run for each composite cluster of sex ratio, with sex ratio as the dependent variable. A number of independent variables are used: the female work participation rate; the ratio of female to male workers; the proportion of female workers who are cultivators, agricultural labourers or workers in household industry; the ratio of male to female literates; the availability of rural health institutions per 10,000 population; the area irrigated as a proportion of gross area sown. The variables are indicators of the quantity and quality of the female workforce, and of the extent of social and economic development in a district. This exercise was repeated for two time points—1961 and 1971. In both years, certain additional indicators (related to pattern of landholding, and agricultural productivity in 1971, and to landholding pattern, scheduled caste or tribe composition of the population in 1961) available at single time points only, have been incorporated into the analysis. The correlation and regression exercise has been separately attempted for crop zones in addition to sex ratio clusters.

The regression analysis reveals that for the country as a whole, the single most important explanatory variable for the sex ratio is the

ratio of female to male workers. Relationships are less clear in individual sex ratio clusters. However, the same variable emerges as significant in several of the clusters of deterioration. In general, the results are clearer in the individual crop zones, perhaps because the crop zones are more akin to natural, zones, as opposed to sex ratio clusters, which are, after all, artificial constructs.

Having examined the issues on a broad canvas, an effort is next made to narrow the focus. An intensive but small field study conducted in Hoshangabad district (four villages; 155 households) sought to examine the differences between the kinds of work men and women do, and the differences between hours worked by either sex in different kinds of activity. The collection of data on work is spaced out over thirteen months, and uses short term periodic recall by respondents. The village population is broken up into nine classes, and the study indicates that genuine differences do exist between the work of men and women, both within and across classes. In general, women appear to be more closely confined to the home, though the threshold of homeboundness receded further and further as one goes down the hierarchy of classes from high to low.

These conclusions regarding women's work and life are linked with questions of their survival and numbers in the population. Despite material differences between the work patterns of the sexes, one recognizes a clear ideology of female subordination. The material base and the ideology appear, as it were, to strengthen each other.

Appendices include material derived from the census on the regional patterns of the sex ratio, and age specific sex ratios. Additional material related to the field study are also given in appendices, as is an analysis of data on the sex ratio in 1981, data on which became available before this study could be completed. The study touches on a wide range of disciplines, as what began as a study of women's numbers becomes a study, ultimately, of her status. The data base ranges from secondary sources; the census, the statistical abstracts published by different state governments, and published literature in sociology, economics and history; to primary field data. It can be considered a significant work both by virtue of its range and depth.

Spatial Organization and the Process of Underdevelopment in Bangladesh, 1880- 1970—A Geographical Analysis

Syed Rafiqul Alam Rumi

Sup : Dr. Atiya Habeeb

With a large population, great poverty and long colonial history Bangladesh emerged as a new nation in 1971. The country was ruled by the British for nearly two centuries and by Pakistan for about twenty four years. Containing within its territory some ninety million of people (1981 Census), Bangladesh today has the highest population density in the world. Nearly 90 per cent of its population lives in the rural areas. According to an ILO study 85 per cent of the rural households and 86 per cent of the rural population in 1963-64 had a per capita family income which was below the subsistence level. Per capita income in 1969-70 at current prices was no higher than US \$ 50 to US \$ 60 per annum and 20 per cent of the population earned no more than US \$ 15 to US \$ 20 per capita per annum.

The agriculture sector in Bangladesh sustains about 80 per cent of the total population and represents the most important segment of the economy. It is the main source of employment and income and contributes about 60 per cent of the gross national product. Since Bangladesh has fertile soil and ample water, the major crop i.e. rice can be harvested three times a year. Jute is the main cash crop of the region. Both rice and jute combinedly occupy on an average 85 per cent of the total cultivated area. Agricultural output depends greatly on weather. Alternative opportunities for employment and income outside of agriculture are extremely limited. It is estimated that about 30 per cent of the labour force are under-employed or unemployed. Hence the characteristic features of the economy of Bangladesh are, a huge army of landless rural labour; low agricultural productivity leading to chronic food deficits; and under-utilization of labour.

The aim of the present study is to outline the fundamental characteristics and causes of underdevelopment in Bangladesh. Hence, at the

theoretical level we shall attempt to identify those specific factors which have historically determined the process of underdevelopment and spatial organisation of the country. At the analytical level we shall attempt to illustrate the specific spatial manifestations of this process of underdevelopment. The study has been developed around five focal themes which are identified as crucial to the understanding of the process of under-development and spatial organization in Bangladesh. These themes are: the demographic structure and its ramifications; the analysis of the agrarian structure; the analysis of the nature of industrial development/decline; the identification of the role of physical infrastructure; and, finally the analysis of the process of urbanization.

In this study underdevelopment in Bangladesh is seen essentially as an economic and spatial system whose capacity to both generate and absorb surpluses is limited at every level and sector of the economy including the export sector where the surpluses mainly originate. Moreover, underdevelopment is related not so much to the unfavourable conditions of exchange (rate of dividends or foreign exchange earnings) but to unfavourable conditions of production (degree of capital intensity, labour productivity etc.) both in the primary and secondary sectors. Within this framework the following hypotheses have been put forward about the process of underdevelopment and spatial organization in Bangladesh.

- (1) The demographic structure of Bangladesh is representative of a typical underdeveloped economy and is characterized by (a) high growth rates and variable regional density patterns which are in direct response to natural factors, (b) heavy concentration of population in rural areas, and (c) an absence of vertical shifts in the occupational structure.
- (2) The agricultural sector where exports mainly originate is weak and has not acted as a modern developed/capitalist sector. because (a) the growth of agricultural production has not been historically due to modernization of the sector but has taken place mainly on the basis of an enlarged commitment of land and labour, (b) the efforts to increase agricultural productivity have been confined to the export crops only, and (c) the agricultural sector has not modernized and technology and agricultural practices have remained more or less unchanged.
- (3) The industrial sector in Bangladesh has historically played an insignificant role in the total economy of the country because (a) it has been characterized by a predominance of primary

processing activities based on elementary industrial processes, (b) there has been an absence of capital goods industries and industries providing agricultural inputs, (c) the modern phase of industrialization has been confined mainly to agro-based export oriented and consumer goods industries, controlled by few industrial families of Pakistan and concentrated in few developed centres of Bangladesh.

- (4) The physical infrastructure in Bangladesh has not been compatible with the requirements of economic development of the country. Historically it has been evolved to establish linkages between the resource regions and the exporting ports i.e. it has been externally oriented and adequate interlinkages between the various segments of the national space economy have not been established.
- (5) The process of urbanization in Bangladesh has been weak and has focused on commercial towns only.

The present study covers a time span which is considered critical for the understanding of present underdevelopment of Bangladesh. The main focus, however, has been on the last quarter of the nineteenth century and the first three quarters of the twentieth century i.e. on the decades between 1880 and 1970. It was during this period that Bangladesh was incorporated into the world of capitalist economy as a primary producer. During the Pakistan period i.e. between 1947 and 1970 the economic development of Bangladesh was neglected. Government and dictators based in West Pakistan allowed the east wing to become their economic colony, earning foreign exchange for metropolitan Pakistan and becoming a protected market for its growing industries.

The study has been organized into seven chapters including an introductory and concluding chapter. In the introductory chapter the theoretical framework has been discussed within which the present study has been done. This is followed by a brief description of the regions, its physiography, climate, soil etc. i.e. of factors which have a direct bearing on the economic activities of Bangladesh.

Chapter II is devoted to the analysis of some demographic characteristics like population size and growth rates, density and distribution pattern of populations and its rural-urban composition. The chapter also highlights the occupational characteristics of the population and its sectoral distribution.

Chapter III deals with the agricultural base of Banaladesh under the two phase of colonial rule. Since the economy of Bangladesh is based on agriculture and an overwhelming majority of the people make a living and are dependent for their survival on agriculture, this sector has been analysed in terms of the land tenure and land revenue system. Subsequently the land use and cropping pattern have been discussed along with the levels and growth of agricultural productivity at the district level.

Chapter IV is designed to elaborate the industrial structure of Bangladesh. The first section of the chapter is devoted to the analysis of the pre-colonial and early colonial industrial structure of Bangladesh and the colonial impact on them. Subsequently an analysis of the distribution of industrial workers in different industries at district level has been attempted.

In chapter V we have tried to identify the role of the physical infrastructure in Bangladesh. This includes a discussion of the considerations of the British policy which determined rail and road construction and the growth of transport network. The transport system during the Pakistan period and the development of sea ports have also been discussed in this chapter.

In Chapter VI the characteristics of urbanization during the study period have been analysed through some selected statistical measures. In the last section of the chapter the growth of individual cities has been outlined.

The conclusions and the summary of the findings of the present study are presented in Chapter VII.

The study concludes that the population distribution pattern of Bangladesh exhibits some typical socio-demographic indices of under-development such as high growth rate with wide regional variations, high dependency ratios and a thoroughly rural and agricultural population. The heavy rurality of Bangladesh population and the excessive burden of young and aged persons seriously reduces the prospects of economic development. The migration pattern in the late nineteenth century was characterized by an excess of immigrants over emigrants. Since partition of 1947 the inter-district movement of population has increased greatly. The sectoral distribution of the working population shows a high share of the primary sector, and there was a steady decrease in the percentage of workers in the secondary sector between 1881 and 1931.

During the study period the production of cash crops for the world market transformed Bangladesh into a producer of export crops, i.e. in a classic way Bangladesh was incorporated into the capitalist world economy as a primary producer. The permanent settlement which was enforced in Bangladesh for more than one and a half century has contributed significantly to the present stagnation in agriculture of the country. The size of average land holding is very small and sometime it is also uneconomic and its distribution pattern is highly inequitable. The overall cropping pattern has not changed much between 1890 and 1970. There has, however, been an appreciable increase in the acreage under rice under the stimulus of the need to feed a rapidly growing population. The increase in agricultural output during the study period was largely due to the spread of cultivation i.e. use of more land and labour. The efforts to increase the productivity were confined to export-oriented crops only. During this period irrigation and other modern technologies were not adopted on a large scale.

The British colonial period experienced the development of primary processing industries which were needed to promote the exports of agricultural raw materials to feed the industries of England. At the same time artisan industries declined. Industrialization during the Pakistan period was not potent enough to bring about an overall economic development of the region. Because the actual control and ownership was monopolized by a few industrial families of West Pakistan. During this period jute industries proliferated and also investment was concentrated in jute mills to bring in surplus foreign exchange which, however, was not used for the development of the region but was siphoned off to west Pakistan. Industries are highly concentrated in a few large urban centres, a fact which intensifies regional disparities.

The development of railway by the imperial British government in Bangladesh was not motivated by the economic and social needs of the country. The basic objectives behind the construction of the railways were to expedite the movement of merchandise of British trade in Bengal. With this development of new modes of transport, the natural transport system of Bangladesh i.e. river transport began to loose in importance because it was slow and failed to cope with the increasing volume of exports from Bangladesh. The earlier roads system of Bangladesh also did not play any significant role in the day to day transportation needs of the people. Transport system during the Pakistan period was also inadequate and outdated in terms of services provided. The analysis of the physical infrastructure in Bangladesh shows that all the development of transport system in the past was designed to serve

the mercantile economy and colonial administration and no consideration was paid either to the welfare of general passenger traffic or to the integration of the regional space economy.

During the British period towns and cities of Bangladesh originated as a means whereby the metropolitan rulers established a base for the administration of the countryside and the exploitation of its resources. During this period the process of urbanization was apparently arrested in several interrelated aspects. The most important phenomenon was that the degree, concentration and speed of urbanization was very low and weak, and the social forces of urbanization were insignificant. Throughout the study period there was a heavy concentration of the urban population in few large urban centres which led to a condition of excessive 'Primacy' and some towns both big and small showed a decline in their population.

The Changing Tenancy Structure in a Developing Agriculture Region : A Case Study of Punjab

Iqbal Singh

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Since the mid-sixties, some parts of India, have experienced a rapid technological change in their agriculture. Certain new material inputs and machines have been introduced. With high irrigation and relatively better institutional and infrastructural facilities, at the time of introduction of HYV seeds, the Punjab experienced very rapid transformation in its agricultural economy and pioneered the green revolution in India. It took a lead over other states in the use of almost all components of the new technology. In this state, the irrigation-HYV seeds-fertilizer component of the new technology was substantially complemented by the other, mechanical component through large scale introduction of tractors, threshers and other machines. It is natural to expect that a technological transformation of this magnitude in the Punjab state should have exercised a profound impact on its agrarian structure.

There are different views among scholars regarding the interaction of technology and agrarian structure. Some are of the view that in labour surplus economies having enormous unemployed labour force in agriculture, tenancy relations, where landlords exploit their tenants through rent and usury, tend to perpetuate agricultural backwardness. Others are of the opinion that technological development and 'capitalist accumulation' in agriculture by making large scale cultivation more profitable will gradually remove tenancy cultivation. The aim of the present study has been to explain the occurrence of tenancy and impact on it of land reforms and more particularly of technological changes in agriculture in the Punjab.

The study is divided broadly into two parts. The first part is devoted to the process of evolution of tenancy in Punjab during the British period, largely on the basis of historical data. A systematic analysis of the changes brought about in the various tenancy relations

through a series of land reform legislations put through after Independence is an important component of this discussion. This is followed in the second part of the study, by an attempt to study the impact of technology on tenancy, on the basis of field data collected purposively from three different regions of Punjab which stand at three different levels of agricultural technology. Region I, representing a scenario of relatively backward agricultural technology has low irrigation intensity and use of all other modern inputs and machines is fairly modest. In Region II, the use of machines is quite extensive but the source of irrigation is mainly canals, tubewell irrigation, wherever possible, being very costly. Thus, limited supply of water in the case of Region II, restricts the choice of crops and thus very intensive use of certain inputs like fertilizers. Region III represents the most modern level of technology in the state. In this region, due to the availability of sufficient and subsidized tubewell water, the use of all modern inputs including machines is fairly widespread. Total households surveyed from all the three regions are 331. Since one among the three regions is technologically backward, its tenancy structure has been extensively compared with that of the other two regions. This comparison captures the impact of technological transformation on the tenancy structure.

The study reveals that area under tenancy started increasing with the Annexation of Punjab by the Britishers. This was because increase in surplus in the hands of landowners, as a result of decrease in the land revenue demand of the state, provided the base for the emergence of lease-market. Out of the tenant cultivated area, the area with tenants-at-will was increasing more rapidly than that with occupancy tenants. Increasing transfer of land from small owners to big owners and money-lenders, fragmentation of holdings, profitability of tenancy cultivation vis-a-vis cultivation through hired labour, and presence of large mass of small and poor peasants with small plots in relation to their subsistence requirements were the main reasons for the growth of tenancy cultivation in the province. The most prevalent form of rent was crop-sharing and the share given to the landlord varied between one-third to one-half of the gross produce. In most cases, the share tended to be one-half. Very few costs were shared by the landlords and sometimes even some additional levies were charged from the tenants. As a result of this, the landlords were able to extract a large share of the 'net income' generated on tenant cultivated area.

Immediately after achieving Independence, a number of land reform laws were passed. An inquiry into the enactments and implementation of these laws has shown that, except in the case of inferior

owners and occupancy tenants, reforms dealing with other aspects of the land tenure structure were grossly inadequate. The legislation relating to the protection to the 'tenants-at-will', typically bleeding under the weight of very high rents as also under perpetual threat of ejection, and that relating to the ceiling on land holdings, remained mostly paper exercises. In terms of their effective implementation, these left much to be desired. As is widely reported, the first reaction of the landlords was to remove the names of 'tenants-at-will' from the revenue records. The result of these tenancy reforms was to instil unprecedented insecurity for lakhs of 'tenants-at-will'. The legislation has had in fact the effect of driving the tenancy underground and promoting unrecorded oral lease arrangements. Since mid-nineteen fifties, the actual decrease in area under tenancy was fairly slow for nearly a decade. A conspicuous decline in tenanted area started only with the introduction of the new technology that made self-cultivation a highly profitable proposition. It was the landless tenants that were the worst hit by land reforms and technological changes as they were the ones who faced large scale evictions. Consequently, purely rented holdings declined from 22 per cent (of all operational holdings) in 1953-54 to around 4 per cent only in 1971-72.

In the second part of our study (Chapters-VI through VIII), the analysis based on primary data has brought about a number of interesting findings. When we compare the backward areas with developed ones we find that (a) there is preponderance of the landless tenants from lower castes continuing as tenants since long time in the backward region as compared with 'new' tenants from higher castes in developed areas ; (b) unlike in backward Region I, there is a growing tendency among the bigger owners, owning tractors and other capital assets in developed areas to lease-in land ; and (c) concentration of rented-in land with the bigger tenants in the developed areas. In developed areas, lessor-lessee relationship is becoming more of a contract between the two more or less equal partners (both from the upper castes) in sharp contrast to the old type tenancy which was a relationship of domination and subordination between two unequal partners. Furthermore, in the backward areas, tenants lease in land to fulfil certain household requirements and to obtain larger employment of their surplus family labour. On the other hand in the developed areas, tenants lease in land primarily to optimise the use of their capital resources. Increase in land and labour productivity due to new technology and introduction of machines which led to the standardisation of work, has made the cultivation of leased-in land on a large scale a feasible proposition.

The analysis of tenancy contracts and tenurial conditions shows that in the backward areas, share-tenancy is the most common form of land renting. On the other hand, area under fixed rent generally tended to increase in the developed areas. Decrease in uncertainty for those who have resources, due to better control over nature as a result of new technology, presence of well off tenants capable of paying rents in advance and avoidance of interference of the lessors generated the demand for fixed rent contracts in the developed areas. The lessor's inability to supervise properly, has also become an important reason for the preference of fixed rent tenancy in the case of developed areas. With regard to 'decision making process', 'begar' and cost sharing etc. relatively well off tenants in developed areas has improved their position vis-a-vis lessors as compared with backward areas.

A Comparison of resource use intensity and productivity among owner cultivated, fixed rent and share rent plots brings about some interesting results. In backward region impact of tenure on efficiency is not found significant. It is only in developed areas, more particularly in Region III, that tenants use less resources and secure lower output per unit of land on their rented plots as compared with their owned plots. Less investment in permanent irrigation structure on rented plots and to an extent ability of the relatively well off tenants in Region III to restrict the use of certain inputs on share-rented plots results in lower output on these plots. On the other hand tenants in general are better cultivators than lessor-cum-owner cultivators in the developed areas.

An analysis of returns from the rented plots shows that in backward areas tenants are not able to get returns equal to the market wages for their family labour. As against this tenants earn profits, after deducting imputed wages and interest on their capital, in the advanced areas. Intensive use of modern technology in advanced areas has led to substantial increases in land and labour productivity and thereby has made agriculture a profitable proposition even for the tenants cultivating with hired labour.

Landlord-tenant relations are generally characterised as semi-feudal production relations. Most of the studies on the mode of production in Indian agriculture, take area under tenancy cultivation as one of the indicators of precapitalist production relations. Decreasing tenant cultivated area is considered as an important manifestation of the capitalist development in agriculture. Our experience shows that in backward areas, tenants are from lower castes and operate small holdings mainly with family resources and around half of them are landless. In contrast to this, in the most developed region, nearly three-fourths of the

rented area is leased-in by the tenants owning tractors. Thus with the technological change a new class of tenants has emerged. The nature of tenancy relations under such conditions are strikingly different than those under backward agriculture.

In advanced areas, a very large share of the total labour employed by the tenant cultivators is hired labour. In fact tractor-owning tenants in the most advanced area of the state, (cultivating nearly three-fourth of the rented area), hire in more than three-fourth of the labour required for cultivation. Further in the developed areas, the tenants take a large proportion of loans from banks and other institutions, utilize these loans for productive purposes, and pay relatively lower interest rates. This reveals the increasing connections of the tenants with the modern capital market and its utilization for the advancement of productive forces. The use of material inputs and machines is quite high in advanced areas compared with the backward areas and their weight in the total input structure has also increased. Capital intensification is also taking place in the advanced areas. As comparison of the backward area with that of the most advanced area of the state shows that average capital assets (mainly used for agricultural purposes) per tenant holding are nearly Rs. 27,500/- in the most advanced region compared with around Rs. 1100/- in the case of backward area. Above all, nearly four-fifths of the gross produce (which works out to Rs. 41,000/- per tenant household at 1979-80 prices in the most advanced region of the state) is marketed by these tenant households through open commercial channels at competitive prices. Obviously these tenant cultivators are not family based self-sufficient, subsistence farmers.

Another characteristic which differentiates between the capitalist and the pre-capitalist relations is the nature of the division of surplus between landowners and tenants. Pre-capitalist rent contains the whole of the surplus whereas surplus product is divided between profit of the entrepreneurial tenants and rent of the landowners under capitalist mode of production. We have examined that in the backward region, the share of the tenants in the 'total returns' is not even equal to the imputed wages of their family labour when calculated at the market wage rate and whole of the surplus as well as a part of the wages (necessary product) of the tenants is appropriated by the landowners. In contrast to this, in the developed regions the surplus (after deducting wages at the market rate for the family labour from the 'total returns') is divided between the profit of the tenants and rent of the landowners. In fact, in the most advanced region, big tenants leasing-in on the fixed rent basis are able to obtain a higher share in the surplus per acre as compared with the rent paid to the landowners. This further confirms

our conclusion that tenancy cannot be branded as pre-capitalist institution under all circumstances.

Thus in areas undergoing structural transformation under the impact of the new technology, the nature of tenancy changed too. The tenancy problem has assumed an entirely different complexion. The trend of the changes in tenancy structure is such that the newly emerging big tenants are more efficient cultivators than the lessor-cum-owner cultivators. Simultaneously these tenants cultivate their owned area more intensively compared with the rented area. One implication of this can be that the resumption of land by the lessors for personal cultivation may possibly lead to a decrease in total output whereas on the other hand, transfer of ownership rights in land from the lessors to lessees could result in increase in total output. However, since these tenants are themselves substantial owners of land, this would further accentuate the existing inequalities in land ownership. Thus in the case of modern tenancy there is a clear contradiction between productivity and equity.

Spatial Patterns of Caste Distribution and Land Relations in Marathwada

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Sup. : Prof. Aijazudin Ahmad

The agrarian problem in India is a complex one and is interlinked with the problem of social hierarchy, one cannot study it in isolation. Traditionally the agrarian relationship was very clear, viz., the high castes were invariably land-owning castes and the low castes were landless, marginal land holders or tenants. The Post-Independence land reforms have not created any substantial dent on the agrarian structure. In fact, the concentration of land ownership in the hands of a few large farmers has increased. In spite of new awakening among the lower classes the socio-agrarian structure remain more or less the same.

The present study aimed at exploring the nature of relationship between caste and land ownership at village level, in a selected region of India, i.e., Marathwada. Marathwada is a central part of Maharashtra and physiographically, can be divided into three distinct zones :

- (i) The zone of high to moderately high amount of rainfall,
- (ii) the zone of medium amount of rainfall and
- (iii) the zone of low amount of rainfall or drought prone zone.

From these three distinct zones six sample tahsils were selected and the primary data were collected at two stages. At the first stage data on land ownership were generated for a sample of fifty villages. It has covered approximately 10,000 land owning households occupying nearly 45,000 hectares of land. At the second stage, data were collected through a schedule from the house-holds in three sample villages. These villages were selected to represent different levels of agricultural development, physiographic and agro-climatic characteristics.

Scheme of Chapterisation

The whole scheme of the study is divided into nine chapters. The first chapter begins with an introductory remark, discussing the scope and nature of the study, its significance and objectives, the data base

and the methodology used. The review of the literature available on this problem is also incorporated in this chapter. The second chapter interprets the spatial patterns of caste distribution at tahsil level in Marathwada. The interpretation is based on the data for the census years of 1931, 1961 and 1971. The third chapter presents in brief the land tenurial systems found to have existed in the course of history in Marathwada. The fourth chapter presents a scheme of regionalisation and the selection of sample tahsils with the choice of sample villages. The fifth chapter examined the caste and land relationship in the fifty sample villages.

On the basis of household survey of approximately 700 households of the three distinct villages, representing very high, medium and low level of agricultural development, a minute investigation of caste/land relationship with a detailed analysis of caste and tenancy, caste and land market has been thoroughly discussed. The whole interpretation is divided into chapter VI-VII and VIII.

Lastly in chapter nine, the findings of the various chapters have been summarised systematically.

Significance of the study

The significance of the present study is that it viewed the agrarian structure as an integrated whole. The intensive researches carried out by social anthropologists have enriched our understanding about the social stratification, but they are conspicuously absent in probing the nature of agrarian inequalities and relationship with the social hierarchy. The agricultural economists have shown keen interest in the agrarian structure of the village and have conducted farm management studies. However they have generally neglected the social hierarchy and have side-tracked the relationship of caste with land. They tend to view the caste as merely a subject of historical or even antiquarian interest.

Caste and class in rural India share certain important properties in common and they can be meaningfully studied within a single framework. In most of the Indian villages land and other forms of property is the single most criterion to understand the structural social system. The present study tried to understand the class characteristics of the various caste groups at the micro-level.

Scope and objective of the study

The present study, though geographical in nature is aimed at examining the type of relationship between the two hierarchies. The

researcher has gone into the field, to find out as to who are the land owners and how the pattern of ownership holdings differs among the various caste groups. The other points of investigation of this study were : (i) to find out the nature of relationship between caste and their size class of land ownership ; (ii) to ascertain as to who actually controls the land market and which caste-groups enter the land market as to buyers and sellers, (iii) to ascertain the tenancy rights of the different caste groups ; and (iv) the impact of new legislations on the existing agrarian structure and the main class of people who have been benefited by this new policy.

Research Questions

Some of the important research questions investigated in this thesis are given below :

- (i) Does social hierarchy in rural India reflect economic hierarchy ?
- (ii) Does caste per se. generate disparity in the ownership of land?
- (iii) Is it true that the development of agricultural infrastructure such as irrigation accentuated further the inequality in land and assets between the caste groups ?
- (iv) It is believed that the small farmers belonging to the peasant castes lease-in land and the large farmer belonging to high castes lease-out land.
- (v) Does leasing-in and leasing-out processes get determined along the caste lines ?
- (vi) Is it true that the process of depeasantisation is commonly rampant among the lower castes ?

These questions were investigated by the researcher with the help of the data generated from the three sample villages representing diverse agro-climatic zones and levels of agricultural development. The inequality in land ownership in the various caste groups is evaluated with the help of statistical method namely 'gini's coefficient'. The choropleth cartographic technique is widely used to understand the distinctiveness of the inequalities over space in Marathwada region. The percentage values have been widely used to explain the unequal relationship between the two hierarchies.

Findings

The key question in all the agrarian structure is the trend of change, whether this trend is positive *i.e.*, whether the small farmers are the owners of land and gradually they are consolidating their land position in the village or negative, *i.e.*, the process of depeasantisation, such as the small farmers losing land to big farmers. If the large farmers are the net buyers, it will set the trend of negative change and if small farmers are net buyers it will establish positive trend.

Some are of the opinion that the inequality in the distribution of land is getting reduced. The increase in the number of land holders and consequent reduction in the size of holdings was primarily attributed to the demographic pressure. The land reforms laws have partially affected the process of reduction of land holdings.

The another important question again comes to whether the landless is gaining land as a result of redistribution of surplus land as well as due to the sub-division of ownership holdings in higher size groups? Or whether the small owners join the ranks of the marginal land holders and marginal ultimately into landless labourer? Instead of proletarianisation the process of pauperisation is being observed or landless is becoming land holder.

It is generally observed that the small farmers are the lessees and large farmers are the lessors. The small farmer leased-in land to utilize the surplus labour lying idle in their households. The large farmer leased out land because operationally the size of land holding is unmanageable and renting out is more profitable over the self cultivation.

It is generally found that where large farmers are leasing-in land, the capital resource base of such farmers is very sound and in near future, they turn out to be the net buying class in the land market. The land gradually concentrated in their hand. This gives birth to disharmonious social relations. If the land is gradually passing in the hands of small and intermediate farmers the agrarian structure will be more egalitarian and harmonious for social relations.

The present study has made an effort in understanding these questions at grass root level in region with a peasant economy clearly dominated by single majority caste.

The major findings of the study are briefly summarised below :

- (i) It is found that generally the high castes, a section of the skilled artisan castes and the Muslims have proportionately

larger share in the ownership of land as compared to their proportionate share as land holders. Agricultural castes, although a numerically dominant caste have a slightly lesser share in the percentage of land holdings than their percentage share as landholders. The Scheduled Castes and the Buddhists as a whole, have proportionately larger share of landholders but their proportionate share in the landholding is significantly low.

The study therefore, confirms the generally held view that social deprivation is essentially based in deprivation in the economic sphere.

- (ii) The patterns of intra-caste inequality in land ownership among the upper and agricultural castes is significantly high as compared to the patterns of inequality among the low castes. This finding confirms that the class struggle within the same caste group is far more evident than the intercaste struggle.
- (iii) The major share of the land is owned by a dominant caste group and leasing-in and leasing-out takes place among themselves.
- (iv) The lessees are small and intermediate land owners and the lessors are big land owners.
- (v) The land buyers are small and medium land owners and the sellers are big and marginal land holders.
- (vi) The proportion of agricultural labourers is very high among the low caste and it is nil in upper castes.
- (vii) The incidence of landlessness among the low castes is highest, followed by artisan caste and it is least among the agricultural caste and nil among the upper castes.
- (viii) The land available for redistribution under the ceiling Act was paltry and insufficient. The only impact it has made is that the large land owners, redistributed the land above ceiling among their own relatives, including the minors. This has dissolved the very large holdings into smaller ones ; but it has not reduced the concentration of land in the hands of a few large land owning families.

Demographic Socio-Economic and cultural Correlates of infant Mortality : A case study of a developed and under-developed region of Andhra Pradesh

S. Sandhya

Sup. Prof. M.K. Premi

The main objective of the study is to understand the demographic, socio-economic and cultural correlates of infant mortality in two different environmental settings. Medak and East Godavari districts in Andhra Pradesh were selected for the study which represent the under-developed and developed regions of the State. As there was considerable difficulty in gaining access to secondary sources for the kind of data needed for the study, a field survey was chosen with a view to collect relevant information on infant deaths and its correlates at the household level.

With regard to demographic factors, the analysis showed that the chances of survival of the first birth were lower to mothers whose age at first conception was low. Also, infant mortality was concentrated at extreme birth orders showing a U-shaped curve in both the districts. It can be concluded that the higher risk of infant mortality during first order births was mainly due to the fact that such births occur predominantly to young women aged 15-19 years whose physical growth is inadequate to bear and rear the new born baby. The reason for higher mortality at higher parity may be due to the rapid succession of births and large number of children.

With regard to influence of birth interval on the outcome of the conception, the analysis showed that when the preceding interval crosses 24 months its effect on the latter becomes negligible in both the districts. Birth interval, when treated as a dependent variable, it was found that the succeeding birth interval was shorter by 10 to 11 months when the child died during infancy than when an infant survived. Further, the birth interval following male infant death was shorter by 3 months than by a female infant death in both the districts.

As there was no significant difference in relation to many of the socio-economic characteristics, the two samples from Medak and East

Godavari were combined for the analysis of socio-cultural correlates. The infant mortality was significantly higher in low caste couples than in high caste couples.

The analysis rejected the hypothesis that infant mortality will be higher in nuclear families than in non-nuclear families. This may be because (i) in non-nuclear families the decision about the kind of medical care to be given to a child in the event of sickness primarily rested with mother-in-law or some other members of the family which often delayed the needed type of medical attention. In contrast, in nuclear families, the parents of the infant took the decision without wasting much time to consult a medical person when an infant fell sick ; (ii) the delivery care is more modern, i.e., para-medical personnel in nuclear families than in non-nuclear families.

With regard to education of mother, the data revealed that there was no significant difference in infant mortality with an increase in the level of education from illiterate to primary schooling, which may be because that educational level was still below the transition stage.

The analysis showed that the infant mortality was significantly higher (i) for mothers who are labourers than for house wives ; (ii) for fathers whose occupation was labour than for any other occupation ; and (iii) in low socio-economic status households than in high socio-economic status households.

The infant mortality was significantly higher when the delivery care was traditional (dai) than when it was modern (para medical personnel). Further, in majority of cases where delivery was conducted by dai the umbilical cord was cut with unsterilized instruments (in most of the cases with sickle). There was a significant sex differential in medical care during illness, i.e., more for male infants than for female infants.

As far as environmental factors and infrastructural facilities are concerned, the analysis showed that infant mortality rate (IMR) was significantly lower in villages with (i) medical facility ; (ii) sanitary facility, than those without them in both the districts. Further, the IMR was lower in villages of both the districts when time taken to reach the required medical facility was less than 30 minutes than when it was more than 30 minutes. It also showed that the IMR was significantly lower in villages where the source of drinking water was bore-well or a tap than those where it was a river water or village well in both the districts.

To sum up, younger women with low age at marriage, and child bearing with short spacing experienced high rate of infant death. This finding may be helpful for future planning and policy decisions aimed at reducing IMR. Also, villages without medical facility, sanitary facility, and potable drinking water had higher infant mortality than those with them. Hence, proper attention should be given by the planners in supplying filtered water to the villagers.

Structure of child employment : A case study of Delhi in search of likely determinants and consequences

Parveen Kumar Nangla

Sup : Prof. Asok Mitra

This study is based on the employment of children in a wide range of occupations in different geographical locations of Delhi and its surroundings. It is a pioneering effort made of the geographical, anthropological, participatory survey type than a mere statistical inquiry designed to test a number of preconceived hypotheses. To understand this phenomenon from as many aspects as possible, apart from perception and personal observation, the study is based upon the primary data collected by interviewing 353 working children, the parents/guardians of 236 of them and the employers of 215 child employees. According to the occupations, these children have been classified as agricultural workers, poultry farm labourers, manufacturing and processing workers, furniture makers, book binders, motor mechanics (repairers), tyre inflators, parking attendants, construction workers, brick-kiln workers, stone breakers, bazar coolies, shop/domestic servants, shoe-shine boys, vendors, newspaper hawkers, and rag pickers.

Characteristics

Nearly 87% of the sample children work in the urban areas and an equal number of the juvenile workers are males. The male child enjoys greater freedom to enter into any activity, whereas, the girls have to restrict themselves to selected occupations which are physically less demanding and ensure them physical security. The study reveals that most of the female children work as unpaid family labourers.

Of the total child workers; 29.5% are self employed, who have to face a tough competition with the adults, harassment by police and municipal employees and the vagaries of weather and traffic. Children working as family labourers (23.2%) enjoy the protection of their parents at the work site. Many of them work on part-time basis to relieve their parents for more arduous jobs or to earn money at a faster rate. A large number of parents feel that children utilised their

spare time better by spending a few hours at work and become more conscious of the dignity of labour. Children employed as casual workers (12.8%) are gripped with a feeling of insecurity in their jobs and, therefore, appear to be more submissive to their employers. The apprentices (5.7%) work for prolonged hours per day, with little or no pay at all. Most of the time they are treated as errand boys. Whenever, a child-apprentice receives some tip from the customer, he is made to share it with his older co-workers in the form of cash or kind.

Nearly one-fourth of the child workers work for more than ten hours a day, most of them are engaged in shop/domestic services. Some of the extremely poor children have to do two jobs/shifts a day spending nearly 15-16 hours at work.

A wide variation is observed in the income distribution of child workers. Many apprentice workers (1.4%) do not receive any money for their labour. On the other hand, some of the vendors, shoe-shiners and rag-pickers earn more than Rs. 500 per month. Nearly one-third of the children do not receive their earnings themselves. Most of those who receive it give this money to their parents to maintain their families. Only two-thirds of the children get some pocket allowance to meet their day-to-day expenditure.

As many as 7.4% children are 'run-aways' from their homes because of the maladjustment with their families. A substantial proportion of these children (6.8%) are houseless, and they stay either in the night-shelters (5.4%) or on the footpaths (1.4%).

Of the sample, nearly two-thirds of the child-workers are migrants to the city. Since their families can not pay the exorbitant rents in the city, many of them live in squatter settlements which lack basic amenities like water, sanitation and electricity. Most of the migrants hail from 'Hindi speaking belt' of India, viz., the states of Uttar Pradesh, Madhya Pradesh, Rajasthan and Bihar.

A wide spread illiteracy prevails among the child workers, specially among the female child-workers. Survey revealed that many parents did not consider the education of daughters to be important enough, as in their opinion the girls had to shift to another family after marriage and their prime work was to look after the household duties which did not require education in a school. Moreover, they also thought education to be purely academic and inappropriate to their work needs.

Determinants

Poverty is the main cause of child labour. The other reasons given by children for their early employment are idleness (15%), use of spare time (13.3%) and to learn skill (4.25%).

One-third of the employers feel concerned towards the poverty stricken people and want to help them by providing jobs to their children. Other reasons for employing children are the honesty among them, sincerity, cheap labour and efficiency which increases their demand to the adults.

A statistical analysis of a few demographic and socio-economic indicators and child employment reveals certain pattern of association. For instance, there is an association between current age of the child and type of his employment. Younger children get absorbed more in the family labour or are self-employed, whereas, older children dominate in the paid (third party) jobs. Children belonging to small families (upto 5 members) join the family labour ; to medium families (6 to 8 members), stay in self-employment and to large families (9 and above), work in paid (third party) jobs. A positive correlation is observed between the years of schooling and the age at employment, meaning thereby that as the number of years spent in the school increases, the age of entry into job-market goes up.

Consequences

The negative effects of child labour overweight its positive effects. Early employment retards the physical and mental development of a child. The lack of education severely restricts his vision of society and he cannot see beyond the narrow limits of the occupation he is engaged in. He loses his confidence, his ambitions remain low and he does not aspire to reach even a mediocre position in the labour market. Though their earnings are low, children contribute nearly 30% to the total family income. One is not certain to comment that child-labour has added to adult-unemployment in India but statistically if child labour is replaced by regular adult employment, it would create nearly 11 million jobs for the unemployed adults (one child performs equal to 2/3rd of an adult).

Many a time, the economic independence at an early age makes a child a pseudo mature. To assimilate himself in the adult world, he develops certain bad habits and gets addicted to smoking, gambling, drug running etc.

The impact of employment related factors on the health of a working child, through regression analysis exercise, indicates that child health is affected, to a certain extent, by age at employment, work experience, working hours, family income, family size, quality of house and the factor of orphanage.

Socio-Demographic Interaction Mode

In this study, a model showing the socio-demographic interaction of child labour has been evolved, which depicts the relationship between the determinants and consequences of child labour and a cause-effect chain reaction. The model also lays bare certain vulnerable points, which if attacked with a proper force would help in eliminating this scare from the society.

Recommendations

Child labour cannot be approached as an isolated problem. It is a complex socio-economic demographic phenomenon which can be reduced and eliminated by a multiplicity of actions both by government and public, at social as well as individual levels. The aim of the social policies should be to reduce the intensity of child-labour and improve the quality of working conditions for children in the short-term and finally eradicate the child labour in long-term planning.

The following measures are suggested to improve the work and living conditions to minimise the negative effects of the early employment :—

The protective laws on the age at employment, minimum wages, working hours, rest-interval need to be enforced more rigorously than at present.

Nutritional food and protective clothes should be provided to the working children at subsidised rates at the place of work. The working children should have access to periodic medical check-ups and treatment through their employers.

Their places of work and residence should be provided with proper infrastructure like safe water and proper sanitation facilities. Besides, provision of gloves and other protective items to children working in the industrial units; protection to self-employed children against the occupational competition with the adults; moral education and protection against misguidance by anti-social elements; and occupational guidance, education and recreational facilities for the working children are some other measures which

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need to be taken up seriously to reduce the hazards of child-labour.

The long term policies should be oriented to the eradication of poverty through employment generating policies and maintenance allowance to the needy families ; the spread of school education with provision of vocational training, creating public awareness to the consequences of early employment and towards the existing laws concerning child labour, effective role of trade unions in implementing the existing laws on minimum age for entry in the labour force, minimum wages, working hours, rest interval etc. and creating public opinion about improving the quality of environment at work, and a balanced regional development on socio-economic fronts.

Settlement Structure and Spatial Organization— A Case Study of Kashmir Valley

Bhupinder Zutshi

Sup : Dr. S. Nangia

The present analysis is an attempt to study the structure and spatial organization of all the inhabited settlements (2853 Rural & 16 urban) in Kashmir Valley. The study examines the structure of settlements in terms of population size, economic characteristics, existing amenities and functions in various homogeneous regions of Kashmir Valley. These indicators are used to identify the spatial organisation of central places in the valley. On the basis of field study conducted in the sample settlements, an attempt has been made in Chapter V to examine the existing central place systems. The study also tries to examine how far the spread effects of these central places are effectively utilized by various occupational groups of population, dwelling at various distance ranges from the identified Central Places.

The main objectives of the present study are :

- (i) To identify the pattern of spatial organisation of settlement in various regional units of the Valley;
- (ii) To study the demographic and economic characteristics of settlements;
- (iii) To identify existing pattern of central places, based on social economic and credit infrastructure amenities.
- (iv) To identify the hierarchic pattern of space relations if any, among the existing central places in the valley on the basis of field study conducted in the sample settlements.
- (v) To examine how far the spread effects of these central places are effectively utilized by various sections of society dwelling at various distance ranges from these central places.
- (vi) To attempt a model of spatial organization of central places in the Valley for achieving balanced regional Development.

The following hypotheses have been tested in the study :

- (i) Population size of a settlement serves a proxy variable for the order of the available functions and amenities. The functions also get diversified with the increase in population. However, required population size for amenities and functions varies from one region to other region;
- (ii) The central places located in harsh environmental condition like in the side valley and hills have very limited growth generative functions, hence the influence of these central places are limited in lesser tributary areas. On the other hand central places located in the valley floor and Karewa regions have pronounced impact in the surrounding hinterlands.
- (iii) The growth of central places in a region is the function of the availability and utilization of the natural and human resources. The central places may thus develop on account of development of social infrastructure function, presence of growth generative function i.e. secondary economic activities and due to institutional development for diffusing and accepting the innovations. Hence only an assimilation of three theories of Christaller's central place, Perrou's Growth pole and Pederson's Diffusion of Social Innovation can explain the organization and development of central places in a given region.
- (iv) The trickling down effects from the central places are not uniformly utilized by various occupational sections of the population. People engaged in secondary and tertiary activities get the maximum benefit, whereas population dependent on agricultural and allied activities get least benefit from these central places. The central places have pronounced impact on the adjoining hinterlands in term of literacy rate, levels of education, levels of demographic indicators and utilization of modern credit and other facilities.

As a brief summary of the task accomplished, this study is divided into six chapters.

In Chapter One "Introduction", the research problem has been identified, its scope and subject matter discussed. The region under study has been earmarked with its physiographic divisions and subdivisions which have been considered as base for regional analysis in the following Chapters. This is followed by an extensive survey of literature

in the relevant field on the basis of which a few hypothesis have been suggested.

Chapter two "Settlement distribution and Economic activities" has a focus on spatial, cultural and economic characteristics of population in different size group of settlements in the valley. Among the human and cultural land-scape 'characteristics', population distribution, density of population, sex ratio, rural-urban distribution of population, literacy rate are taken up for analysis. Besides, the economic structure in terms of labour force participation among various sectors of economy is also evaluated.

The study indicates that the valley is dominated by small sized (less than 1000 persons) rural settlements. Only 5 percent of rural settlements have population size of more than 2000 persons. This distribution indicates the preponderance of agricultural activities which prevents the concentration of urban centres.

The secondary activities are dominated by small scale handicrafts and house-hold industries, and absorb less than 8% of the total work force on the basis of workers participation in secondary activities. Two significant zones have been identified one around Srinagar city and the other near Anantnag, Sopore and Bandipore. Most of settlements with high percentage of secondary workers are situated near the Urban Centres, which provide market facilities for their handicraft products.

The tertiary activities dominate in the urban centres of the valley floor and their adjoining areas. Side valleys although developed in terms of tourist industry, lack diversified tertiary activities. Even the existing activities are controlled by the businessmen from the valley floor. Thus most of the settlements lack productive mechanism for the overall economic development of the region. This is further accentuated by the absence of primary activities for six months due to harsh climatic conditions. Hence the total production of six months is to suffice for the whole year. Such a phenomena has created serious economic problem for the valley. This is further strained by the use of rudimentary techniques of agricultural development. Hence, in order to boost the economy and generate employment of the valley, efforts must be made to harness the resource base and to develop the industrial activities on the basis of existing resources.

In Chapter III "Ranking of Settlement", an exercise in the ranking of all the 2869 inhabited settlements has been attempted on the basis of a composite score obtained by assigning weightages to selected variables

like non-primary workers, social facilities, public amenities, Economic infrastructure and Credit facilities.

The distribution pattern of such selected variables indicates a close association with population size of settlements with a few exceptions. The physical framework of the valley in term of relief, climate and land use pattern seems to determine the distribution pattern of amenities and facilities.

Clustering of function has been observed among the rural settlements having large population size. However, all the urban centres of the valley, irrespective of population size have large clustering of function as compared to the rural settlements of the same population size.

The functional gap of different orders of settlements (as determined by the differences in the composite score) is very wide for all the four alternative schemes of indicators. This reflects the dominance of Srinagar centre in all the alternative schemes of ranking. The functional gap between Srinagar and other second order settlement is exceptionally wide, indicating the primate nature of the centre, and its overshadow effect on the rest of the valley. The presence of only a few third and fourth order centres and that too in the valley floor indicates that the spread effects are not properly trickled down to the surrounding hinterlands.

Chapter IV "Characteristics of Central Places" identifies the existing central places in the valley based on the ranking of settlements. The size, spatial distribution, social and economic functions and other economic characteristics of these settlements are analysed, to evaluate their potentialities for the development of the region. Delimitation of central place regions on the basis of theoretical concept of gravity model has been also worked out.

The distribution pattern of central places in the valley shows highly concentrated pattern—mainly in the valley floor; where as side valley, Karewas and Hills are devoid of them. The near neighbour distance analysis shows random distribution of such central places in the valley. The rank size rule depicts the maximum concentration of poulation in Srinagar urban centre, which has registered 200 per cent more population as compared to its expected population. All other central places have registered 40 to 60 per-cent population less than the expected population.

Most of the central places lack the required number of functional amenities to develop both centrifugal and centrepetal forces for the overall regional development. Wide gaps in the functional scores for social, economic and credit functions is observed between Srinagar and second order central places, which clearly reflects the weak functional development of all central places except Srinagar.

Economic generative forces are absent in most of the central places, as they devote very few workers in the secondary activities. Hence the job opportunities for the local population in all the central places are few. This has led to low purchasing power of the population as well as glaring economic disparities. Hence the benefits of planned development are not being utilized by all sections of population uniformly. Thus the multipliers effect does not take place.

The functional classification of central places shows the dominance of primary activities in most of the central places. The diversification of economic activities is limited to Srinagar, Anantnag and Sopore. The overall characteristics of central places reflect that they do not possess the required functional amenities to exert the spread effects.

Chapter five, "Spatial Organisation of Central Places and their Impact on the Surrounding Areas. A field study approach" is based on the field-work conducted in seventy five villages of the valley. The field work was conducted basically to examine the pattern of interaction of the villages with the central places of various orders. The patterns related to distance and frequency and the purpose of interaction. Such interactions have brought certain social and economic changes in the settlements under observation. The intensity of such changes and their role in the development process have been examined in section two of this Chapter. This approach has helped in generating a spatial development model for integrated area development, which has been explained in section three.

The analysis of the field data highlights the dominance of Srinagar centre, which acts as a model centre for larger tributary areas even for smaller order of functions. All the specialized activities like medical, educational and banking are handled by Srinagar even for far flung areas of Gulmarg, Sonawari, Tral and Shupian. Among the second order settlements, Baramulla has very little influence over its hinterland. It serves at a nodal centre only for Uri tehsil. On the other hand, Sopore centre, which is located only 5 Kms. away from Baramulla, dominates the whole north western valley. The south eastern part is being served by Anantnag. The Centre place systems reflect wide gaps in the

supporting Central places among the 1st and 2nd order central places. The distribution of nodal centres observed through the sample study reflects weak nodal hierarchy in the side valley. Karewa and Hills, as most of the settlements in these areas have to travel large distances for the necessary functions and amenities.

The sample study reveals that the central places have an impact on the surrounding regions. The literacy rate, levels of education, levels of demographic indicators and the utilization of modern scientific and technological development is found high among the settlements located within the range of less than 10 Kms. from the nearest Central place. However, the impact is more pronounced in the favourable environmental conditions like in the Valley floor and Karewa. The study also reveals that the facilities at these central places are not uniformly utilized by various occupational groups. Cultivators and population dependent upon other allied agricultural activities have low literacy rate, low levels of education and low institutional development as compared to the population dependent upon secondary and tertiary activities, within the specified distance range from the central places. Thus there exist large scale disparities among the various occupational groups in the utilization of functions and amenities. This indicates that the presence of central place may not benefit the surrounding areas uniformly unless certain steps are taken to enhance the social awareness and purchasing power of the population. Thus only the assimilation of growth generative function, development of institutional base through social awareness and enhancement of purchasing power of population will provide rationale for the process of development.

The last chapter "Conclusion" briefly outlines the main inferences from the study and a few suggestions derived therefrom. It is suggested that the central places should be developed especially by providing economic infrastructure base like agro-based, forest based and handicraft industries and these industries should be employment oriented. A spatial model of central places has also been worked out, to provide a scheme for the development of generative functions and institutional development functions in specific areas. The identification of these central places is done on the basis of existing resource base, existing space relations, hinterland population size, functions, amenities and accessibility. The future development of growth generative functions in these identified central places has also been specified.

Farm Size, Resource use Pattern and Productivity Level : A Comparative Study of Dry and Irrigated Farming of Maharashtra

S.K. Thorat

Sup : Prof. G.K. Chadha

Objective of the Study

The main objective of the present study is to examine in depth the productivity levels, resource use and the pattern of technological change in dry and irrigated region of Maharashtra State, where sizable portion of area falls in the scarcity tract. The specific objectives are as under:

- (i) to study across regions and farm-size categories, the variations in agricultural productivity, yield rates and income levels.
- (ii) to analyse the differences in the agricultural productivity both aggregate and for individual crops in terms of resource use pattern, across regions and farm size categories.
- (iii) to study the adoption level of new technology in Dry and Irrigated regions with a view to assess its impact on productivity and income level.

The Regions, the Data and the Methodology

The study is based on data for about 450 farms of different sizes purposely drawn from the scarcity zone of Maharashtra State by conducting a field survey during 1978-79. The total sample is drawn from three different regions, the regions are designated as *Irrigated*, *Partially Irrigated* and *Dry* (Regions I, II and III respectively). While Region I throws up the production potential and resource use pattern of a relatively better region of the state, Region III brings into sharp focus the production constraints and technological backwardness of a completely dry region of Maharashtra. Region II brings out the problems and prospects of an area operating at an intermediate level of production technology. It needs to be mentioned that all the three regions of our study are located in the scarcity zone of the state, and

their mutual differences are essentially to be interpreted in a relative sense. An inter-regional comparative analysis has been pursued with the specific objective of bringing out the differences between dry and irrigated regions lying within the boundaries of the scarcity zone of Maharashtra state.

The methodology used in the present study is devised keeping in view the objectives of the study. The quantitative and qualitative differences as regards the capital stock and flow of resource inputs between dry and irrigated regions and between small and medium/large farms, are examined through arithmetic averages and simple regression. The variations in overall productivity and yield rates within each of these regions are explained by using multiple regression method. The effect of some inputs on the output is also seen by incorporating dummy variables. The empirical findings revolve mainly around the estimated coefficients of the regression equations.

Main findings Agricultural Features Sample Farms

Our discussion regarding the characteristics of sample farms in the three regions leads to the following conclusions.

- (i) As regards the regional differences in cropping pattern, jawar/bajra and pulses and oilseeds are the main crops in dry and partially irrigated regions (Region III and Region II), while in the latter, some area is also devoted to wheat and sugarcane. In Irrigated region I (Region I), in addition to jawar/bajra, farmers who devote substantial area under wheat, sugarcane, cotton and fodder crops. The cropping intensity is undoubtedly high in Region I compared with Regions II and III.
- (ii) At the farm level with the exception of slightly higher proportion of area under sugarcane, on the large farms of Region II and moong and bajra in Region II and III respectively, the results did not indicate much variations in the cropping pattern among the farms of different size categories.
- (iii) The percentage of area under HYV of jawar, bajra, and wheat is strikingly higher in Region I than in Region II and III. It is extremely low in the dry region. The percentage of area under HYV is higher under wheat and cotton compared with jawar and bajra.

Capital Stock

About the stock of capital assets on the sample farms our study suggests the following :

- (i) The value of total assets is remarkably higher in Region I compared with that of the other regions ; this particularly the case with regard to the modern implements and machinery, indicating a switch over in the investment priorities of the farmers of Region I. While irrigation, draught and milch animals get priority in Region II. Draught and milch animals find a top preference in Region III.
- (ii) The per acre value of total capital and machinery is inversely related with farm size in Regions II and III, but positively in Region I. With the exception of irrigation (in which case small farms show higher investment per acre than the large farms), same relation is observed in the case of individual items of implements and machinery.
- (iii) Although the small farms could not invest much on modern implements practically nothing on tractor and thrashers, in Region I nearly 57 per cent and 41 per cent of the small farms make use of these implements respectively. The per acre use of tractor hours is, however, lower compared with large farms.

Resource Use Pattern

About the intensity of resource use the main findings are as follows :

- (i) Across the regions, the use of new inputs comprising fertilizer, capital services and other biochemical inputs are much higher in Region I than in Regions II and III. In Turn, farmers in Region II make higher expenditure on these inputs over their counterparts in Region III. The same is the trend with regard to the human labour inputs. Interregional differences are, however, more sharp in the case of new inputs and improved capital services, infact the use of tractor and other inputs such as pesticides is practically absent in Regions II and III.
- (ii) At the farm level, in Region III, where traditional inputs dominate, the small farms clearly indicate higher use of all

inputs per acre. But in relatively developed regions (viz. Regions I and II), the small farms lose their edge and the inverse relationship discernible in Region III, turns in to positive, more surely in the case of non-conventional inputs such as improved capital services, chemical fertilizer pesticides etc. It is only in the case of some traditional inputs namely irrigation, human labour and bullock labour, that small farms seem to retain their edge over the large farms.

Productivity and Income levels

The main aim of the present study has been to examine variations in productivity and yield rates across regions and farm-size categories. The results reveal that the overall productivity as well as the yield rates for individual crops are much higher in Region I than in Regions II and III. The productivity in Region I is nearly ten and three times as high as in Region II and II respectively. Similarly, the productivity per acre in Region II is thrice the level of Region III. At the crop level, the inter-regional variations are much more pronounced in the case of jawar and bajra and less in the case of wheat and sugarcane. Thus it is clear that the inter-regional variations, as regards the productivity levels and yield rates, are in conformity with the levels of technological headway achieved by the three regions, which in turn, has been in conformity with the level of irrigation facilities created in each of the three regions of our study.

- (iii) Across the farm-size groups the results show a neutral relationship between overall productivity and farm-size in all the three regions. As regards the crops on the whole, oilseeds in Region II and wheat in Region III show an evidence of decline in yield rates with increase in farm-size. But in the case of wheat in Region I particularly the HYV wheats the yield rate clearly indicates an increase along the farm-size continuum. In our opinion, the higher level of output specifically on HYV's of wheat in Region I has been achieved by large farms mainly through the higher use of both capital and labour inputs.

Determinants of Productivity

The regression analysis shows that a package of new inputs such as fertilizer, HYV and tractor has generated a substantial gain in the total and crop level output in Region I. The shift to the modern production technology has boosted up the marginal productivity of the

traditional resource inputs such as human and bullock labour. It appears, the new technology is gradually becoming a strong substitute for land and to some extent for labour input too. In Region II, due to a relatively lower degree of technological change a mixture of traditional and new inputs seems to govern the behaviour of output at the overall and crop level. While the fertilizers and human labour inputs are particularly important for the farm level output and for individual crops, irrigation and bullock labour also figures prominently in the case of a few crops. The new input HYV seems to generate some gain in the output of jawar and wheat particularly by boosting up the productivity of traditional resource inputs such as irrigation human and bullock labour. In Region III the human labour input has emerged as a very important determinant of output at the farm and crop levels. But to the near absence of irrigation and other inputs, the production process in this region is governed primarily through land and labour inputs, especially the latter.

Policy Implications

The findings of the study provide some policy implications at the region and farm levels

Regional Ramifications : At the regional level it recommends the following :

- (i) In view of the low spread of HYV of jawar, it recommends the development of pest resistant and qualitatively superior varieties of jawar suited to different spatial agro-climatic conditions within the dry Region.
- (ii) It recommends the changes in the credit policy of cooperative credit institutions in such a way that it accommodates the cyclical fluctuation in the income of farmers in dry region, preferably a change from the present half yearly and yearly basis to two-three yearly basis.
- (iii) The findings recommend appropriate changes in the existing irrigation policy which will help in making the irrigation a useful resource for dry area.

Farm-Level Ramifications : At the farm level it recommends the following :

- (i) It recommends the development of public irrigation and provision of financial support for creating well irrigation facilities on the small farms in all regions under study.

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- (ii) It recommends the creation of essential machinery service for the small farms through the rural institutions such as state-owned or cooperatives-owned service centres.
- (iii) It recommends the adequate supply of crop loan on liberal terms and condition to small farms in Region I and the medium term loan for them in Regions II and II, particularly for the purchase of bullocks.

Biotechnology : Western strategies and its implications to the developing countries with specific reference to India

V. R. Gummadi

Sup : Prof. Sivatosh Mookerjee

The potential applications of biotechnology are far reaching and would affect inevitably almost all vital sectors of economy such as pharmaceuticals, agriculture, chemicals, environment and energy in the very near future. The most promising feature of this field is the utilisation of renewable resources which are abundantly available in almost all parts of the world. Secondly, the development of biotechnology on an industrial scale would do away with dependency on finite non-renewable resources in industrial sector.

2. Scope of the Present Study

Aims and objectives : The present study aims at assessing the following aspects.

- (i) The potential applications of biotechnology in various sectors;
- (ii) The western strategies in this frontier technological field, i.e., critical assessment of individual western countries like the USA, Japan, the UK, the FRG, France and Switzerland which are world leaders in this frontier technological field;
- (iii) The implications of western strategies in biotechnology to the developing countries by assessing the emerging trends;
- (iv) A critical evaluation of biotechnology in India in light of the above.

2. Research Methodology

In this study an attempt has been made to approach the problem from the science policy perspective. The analysis has been done taking cognizance of the Indian situation.

Research data has been collected from both primary and secondary sources. Since one of the limitations of the present study is lack of

quantifiable data, only research trends are assessed from science policy perspective by utilising various tools and techniques that are specific to biotechnology field.

The present study "Biotechnology : Western Strategies and its Implications to the Developing Countries with Specific Reference to India" has been chapterised as follows :

In the first chapter, importance of biotechnology as one of the frontier technological fields has been explained. Also aims and objectives of the present study, its limitations, research methodology followed and an overview of literature pertaining to this area have been documented.

In the second chapter, "The Technological Facets", important biotechnologies that have emerged recently as vital to biotechnology have been discussed. These are recombinant DNA technology, monoclonal antibody (MAB) technology, cell and tissue culture technology and bioprocessing technology.

In the third chapter, potential applications of biotechnology in various sectors such as pharmaceutical, agricultural and animal farming, biomass, chemicals and speciality chemicals and environmental technology have been discussed along with the role of biotechnology firms, multinationals and various university research groups pursuing research in specific R & D areas.

The fourth chapter deals with the western biotechnology strategies. Since very few industrialised countries such as the USA, Japan, the UK, the FRG, France and Switzerland are leading in promotion of biotechnology related R & D, the politics and programmes of each of these countries coupled with their private sector activities in this area have been studied in detail.

The western R & D strategies pertaining to biotechnology have definite global implications especially to the developing countries. Based on the emerging trends, the fifth chapter deals with the impact of western strategies on developing countries.

The penultimate chapter "Biotechnology R & D in India" assesses the R & D policies and programmes in India and presents a critical evaluation of ongoing research activities in this field. It also identifies the impediments which have to be overcome in order to promote biotechnology R & D in India.

In the final chapter, based on the above study, certain conclusions have been drawn on the emerging industrial pattern of biotechnology, its importance and its implications to developing countries. Also its relevance to specific Indian situation has been brought to focus.

3. Various Sectors

In the pharmaceutical sector, biotechnology provides new diagnostic tools and techniques to exactly identify specific diseases and also to elucidate the disease mechanism. In addition to improving the efficiency of existing bioprocess technologies, the application of biotechnology would also lead to the production of novel products that have beneficial effects in prophylactic and therapeutic purposes. For example, rDNA product "humulin" (human insulin) is already being marketed and human growth hormones and lymphokines are under clinical trial. MABs for various diagnostic purposes are already in the market.

In the agriculture sector, the application of biotechnology, in the long term, would lead to the development of novel plant varieties with high productivity and resistance to adverse environmental conditions. Genetically engineered bacteria to prevent frost damage to crops is already developed. The development of biopesticides and biofertilisers would also substitute chemical pesticides and fertilisers. Monsanto's success in developing biocides through genetically engineered *B. thuringiensis* reveals the promises this field holds in agricultural sector. Another most promising application could be preservation and effective utilisation of plant germplasm resources.

In the animal farming sector, the application of biotechnology would help in the production of superior hybrid animal stock. In addition, biotechnology would also revolutionise animal health sector by making it feasible to produce novel vaccines and other health-care products. The first vaccine produced through rDNA technology has already been marketed in the USA by Salsbury Laboratories in 1983. In the chemical sector, biotechnology would enhance the production of speciality chemicals and food activities by traditional methods, as well as through novel methods. Genex, G D Searle and Ajinomoto have successfully developed rDNA technology for producing L-phenylalanine, a vital amino acid. Another important feature of biotechnology is utilisation of biomass as feedstock for the production of commodity chemicals as well as energy. The applications in the environment sector include effective utilisation of agricultural, industrial and municipal wastes for the production of single cell protein.

4. Western Strategies

Realising the potential of biotechnology, western countries have since late 1970s embarked upon definite strategies, both short term and long term. In USA the development of biotechnology is mainly due to specific factors which have strengthened American position in comparison to their western counterparts.

These factors are :

- (i) The tradition of continuous federal support to basic research in biology especially in biomedical field;
- (ii) Emergence of research scientist - entrepreneurs;
- (iii) Availability of venture capital funds; and
- (iv) Multinational corporations' technological innovative culture and their links with universities and research scientist - entrepreneurs.

All these factors led to the emergence of new biotechnology firms (NBFs). These NBFs have played a vital role in strengthening the USA's global domination in this field. However recent emerging trends clearly indicate that industrial biotechnological field is in transition and most of the NBFs would be controlled or acquired by the multinationals. Very few NBFs will emerge as vertically integrated companies. Multinationals, though late entrants to this field, have already made their presence felt by committing huge investments for biotechnological in house R & D, collaborations, investments and acquisitions of NBFs and tieups with the universities. In rDNA technology and monoclonal antibody technology, USA still remains the world leader. In plant tissue culture technology it is on par with the European countries and Japan, whereas in bioprocess technology it is being threatened by Japan. Being aware of this weakness, the federal government is increasingly emphasising R & D in bioprocess technology.

Unlike USA, Japan followed a different strategy for the development of this frontier technological field. Governmental organisations in collaboration with multinationals from diverse sectors have evolved targeted biotechnological R & D programmes which are being strictly adhered to. In addition, in the areas in which Japan is weak (eg: rDNA technology) they are increasingly collaborating with American NBFs with the ultimate aim of strengthening their own position in this field. It has evolved novel programmes like ERATO in order to promote inno-

vativeness among its scientific community. Another aspect of Japanese strategy is its emphasis on basic research in modern biology anticipating obstacles in free information flow from the western countries. Japanese traditional expertise would be of immense value in the development of biotechnology based industries on a large scale.

Britain's strategies in biotechnology field are aimed at not to lag behind their western counterparts and Japan. The establishment of Celltech and Agriculture Genetics Company with governmental support is a case in point. The initial reluctance of British multinationals to invest in this field has of late largely been overcome because of a combination of factors such as government incentive schemes, as well as the realisation of vast commercial potential. The British government has of late followed the Japanese pattern of actively collaborating with multinationals in taking up targeted biotechnology programmes. Another interesting feature of UK biotechnology is the establishment of NBFs by the universities and colleges on one hand and by multinationals on the other. UK's strength in basic research in modern biology is not matched by its efforts in commercialising this research.

In both France and Germany strong governmental commitments to the development of biotechnology have led to the establishment of new institutes or reorganisation of existing research institutes. In addition, autonomous, research institutes have also started emphasising on biotechnology R & D. In both the countries multinationals have also committed huge biotechnology R & D investments by expanding inhouse R & D facilities, collaborating with NBFs and forging links with scientific communities. Weak links are identified and efforts are being made to rectify this situation.

On the contrary, in Switzerland federal support is comparatively less. Most of the biotechnology research is being carried out by multinationals. Another interesting feature is that Switzerland's bioprocessing technology is better developed as compared to its European counterparts.

4.1. Common Features of western strategies

Though specific approaches are followed in each developed country some of the common features which emerge are :

- (i) Increased governmental support, both in the formulation of R & D policies in this field as well as in the allocation of funds for both basic and applied research especially in areas where critical gaps exist;

- (ii) Intensification of R & D activities by multinational corporations through various mechanisms in order to capture a significant share of the world market for biotechnologically derived products.

The above western strategies have led to significant success till date both in R & D activities and commercial achievements.

These developments in western countries would have profound impact on the developing nations. Like in other frontier technologies, western strategies are aimed at achieving technological monopoly in this field and capturing the Third World markets.

5. Developing Countries

The commercialisation of biotechnology would forge new relationships between the developed and developing countries, much to the disadvantage of the latter. The present trends indicate the following scenario in the biotechnology field in relation to developed and developing countries :

- (i) Strengthening the already existing market dominance of multinationals in various vital sectors of economy;
- (ii) Reduction of dependency of western countries on Third World nations for various raw materials; and
- (iii) Perpetuating technological dependency of the Third World countries on the west.

From the above it is clear that unless proper biotechnology strategies are followed in the developing countries it is quite likely that biotechnology may reinforce the already existing unequal economic relations between South and North.

Developing countries stand to gain enormous benefits by the application of biotechnology in almost all the sectors of their economy. The significant potential benefits for the developing countries are : (a) eradicating malnutrition by providing biotechnology based protein rich food and (b) increasing the productivity of their agricultural crops. Also, the health standard of the Third World population could be increased manifold by the application of biotechnological tools and techniques for diagnostic and therapeutic purposes. Most importantly, by eradicating the tropical diseases alone, millions of lives can be saved in this hemisphere. In the energy sector, by effective utilisation of agricultural,

animal and municipal wastes, biogas as an alternative fuel could be generated which would be of enormous help to the majority of rural population in these countries. In addition, the resultant residue could be utilised as a manure in the agriculture farms. Another potential benefit would be, by developing biofertilisers and biopesticides, the agricultural productivity could be increased manifold and dependency on imported petroleum feedstock could be reduced.

Unlike in other frontier technologies, Third World countries could achieve relative self reliance in this technological field provided proper policies are formulated and implemented as a national priority.

Though the emphasis of the western countries is on large scale production process and sophisticated technologies, these are relevant to the western environment only, and hence need not be imitated in toto by the developing countries. Biotechnology can be effectively applied on a small scale in specific areas by utilising the local resources available even at the village level.

Third World rural populations have enormous experience in the application of traditional biotechnology for the production of various fermented foods and beverages. This traditional knowledge can be effectively integrated with modern biotechnology. Though sophisticated skills are necessary in the field of rDNA technology, in most of the other areas, with further perfection, it is possible to impart the technical knowledge to an average skilled person. The development of trained manpower would be of enormous help in the diffusion of biotechnology to various sectors.

However, some of the impediments for the application of biotechnology in the Third World countries have to be tackled on an urgent basis. In most of these countries, the infrastructural facilities for biotechnology research are almost non existent and need to be created. Also shortage of trained manpower, a phenomenon common even to the western countries, has to be tackled on a priority basis. R & D resources have to be appropriately allocated to carry out biotechnology research on long term basis.

The major bottleneck in these countries is the lack of clearcut long term strategies in this field. For example, in the pharmaceutical sector, multinationals are giving priority to market mechanism over the health interests of the world population. Consequently their main focus is on those areas where they can accrue maximum commercial profits. Hence, for obvious reasons the research on tropical diseases is not on their immediate agenda. Even though biotechnology provides effective tools

and techniques to understand the disease mechanism, not much research efforts have been put in this direction. Similar examples also exist in other sectors. This situation compels the Third World countries to formulate long term R & D strategies to tackle specific problems that are of vital importance to their population.

At present only a few Third World countries like India, Mexico and Brazil have significant biotechnology R & D strategies which are formulated according to the specific needs of each country. In most of the other developing countries even the realisation to formulate these strategies is non-existent.

India has made significant progress in tissue culture technology whereas Brazil has embarked upon producing alcohol from agricultural resources. Mexico has also made remarkable progress, independent of western desires, in single cell protein. Though information on Chinese strategies in this field is not available, the strides they have made in improving the bread of paddy crops through another culture, a technique invented in India first, goes to prove the availability of expertise in this country. The great strides made by these countries indicate that given the proper thrust, biotechnology capabilities could be developed on par with international standards.

Most of the Third World countries have neither enough resources nor capabilities to carry out biotechnology research independently. In view of this, effective regional cooperation among the developing countries is the only rational way to avail the benefits of biotechnology research. Even in the western countries where fierce competition exists, bilateral and multilateral cooperations have emerged. For example, Japan and USA who are competing for world wide markets in this field, have gone in for bilateral collaboration in certain areas both at the governmental and industry level. Similarly EEC has also initiated "European Molecular Biology Engineering Programme" in order to carry out biotechnology research in areas where critical lacunae exist. Likewise, OECD countries are carrying out a coordinated research programme called "Biotechnology Network".

From the above it is evident that in this frontier technology, through regional cooperation, developing countries also stand to gain. Proper strategies by Third World are necessary on how to gain scientific knowledge from their western counterparts without falling into the dependency trap as in other frontier technological fields like microelectronics and computers. This can be made possible through the utilisation of various United Nations agencies. In addition, through effective bilateral and multilateral cooperation among the developing countries,

it is feasible to pool resources and capabilities and share the scientific knowledge in this field. However, till date little effort have been made for effective cooperation among the developing countries. Only international organisations like UNIDO have made certain progress in this direction. The establishment of "International Centre for Genetic Engineering and Biotechnology" in India and Italy is mainly aimed at improving the Third World research capabilities in this field and facilitating the transfer of scientific and technological know how between the developed and developing countries.

Similarly in the mid 1970s, the joint efforts of UNEP/UNIDO/ UNESCO/ICRO have led to the establishment of "Microbial Resource Centres" (MIRCEN) mainly to enhance Third World capabilities in preserving and improving upon microbiological organisms. These resource centres would be of immense help for developing microbiology - based industries in the near future. Likewise UNDP/World Bank/WHO's "Special Programme for Research and Training in Tropical Diseases" is mainly concentrating on the application of biotechnology that are relevant to the eradication of tropical diseases. Bilateral cooperation among the developing countries is also emerging of late. For example, the recent India - Mexico cooperative agreement in biotechnology is a significant step in this direction.

India has correctly identified six priority areas in biotechnology field. However, wide gaps exist between formulations and implementation of R & D programmes. The most important factor for Indian situation is the need for integration of classical techniques with the modern biotechnological methods. For example, genetic engineering techniques in developing superior varieties of plants could not be emphasised much at the cost of classical plant breeding techniques. Likewise, Indian expertise in tissue culture technology is mainly because of its classical research. This strength in traditional research can be effectively integrated with biotechnological methods for evolving technologies that are relevant to Indian situation.

While government funding may help in promoting basic research in biotechnology, it need not necessarily lead to the emergence of biotechnology based industries. For this, proper linkages among universities/national laboratories and the private sector have to be forged and industrial sector has to be geared to establish science based industries in this frontier field. The most important aspect for the developing countries including India is the integration of modern and traditional technologies in order to evolve suitable biotechnologies.

The Socio-Political Background of Women in Orissa Politics

Annapurna Devi

Sup: Dr. C. N. Venugopal

By convention women and politics do not go together. Politics calls for public activities dominated by men with masculine traits. It is a process through which necessary makers of public concern are decided by the chosen representatives of the people. Women belong to the "private" sphere of society with centers of anxiety and activity on family life.

The size, scope and effectiveness of modern government makes power a central value in modern society and the distribution of power, a central focus of contention. Political power—that is, the right to make policy for the society—is the major stake in every election. The notion that power should be shared by those effected by it proved so compelling that it became the basis of a new conception of legitimacy, a new doctrine of rulers. Popular sovereignty, representative government, republicanism, democracy are the names we give to political systems that found legitimacy on the broad sharing of political power, and competitive elections are the institutional practice that permit masses a voice in decisions about who should rule and to what broad ends.

By the middle of this century, universal adult suffrage had been achieved in virtually all democratic nations. Everywhere the right to vote symbolized access to political power. The franchise constituted a kind of certificate of eligibility for political leadership. Newly enfranchised groups, classes, regions, races, used the vote to move their representatives into positions of political leadership. But unlike the enfranchisement of other categories of people *e.g.*, Blacks, Irish, Italian, women's suffrage did not conspicuously affect the social composition of government.

The near-universal recognition of women's political rights and the strength of their voting numbers in many countries are nowhere reflect-

ed in their direct role in government. An enormous disparity exists between women's formal political equality and their actual exercise of political power. Though 99.5 percent of the women in the world are legally entitled to participate in the political process, the number of women in public office remains in most countries very low. The feminine half of our population is seldom represented by more than five to ten percent of the members of any state legislature.

Various studies done in different provinces have also come out with the conclusion that women are by and large ineffective in politics. It is generally believed that a woman's willingness to engage herself in active politics is likely to be related to her economic, social and domestic status. But it has been found that women's growing presence in the employment market, greater access to modern education, and a developing awareness of the political system have not brought them forward into the public domain on a large scale. Hence, it is misleading to assume that socio-economic indicators such as literacy, urbanization and industrialization are more conducive to greater participation of women in politics. However, these indicators may be related to structures and values. In several states, women are politically more active than others. On the whole investigations have shown that women form a tiny minority among the political elites. The reasons for this must not be attributed to a single set of factors. Sometimes it is argued that even where women have similar social and economic resources as men, they will participate less at the elite level.

In my study, an attempt is made to distinguish broadly between relevant characteristics of women (on supply-side) on the one hand, and of politics (demand-side) on the other, although they are inter-dependent. The first set of factors emphasizes on the implications of socialisation and social constraints (situational and structural). Socialisation includes childhood and adulthood experiences. Situational constraints refer to domestic burdens on women who are housewives or mothers. Structural constraints correspond to educational and occupational constraints which affects women's access to the realm of political elites. The second set of factors rests on the 'demand' side of the inter-action. This would include the roles played by the political institutions which the recruitment of women in the political life.

'Political participation' can best be explained through two other concepts, namely, political socialisation and politicization. Political socialization has been defined as the "interaction between the social system and an individual, whereby both predisposition for and skills

relating to participation in the political sphere are internalised." It is a process by which a person acquires his views of the political world—its processes, events and phenomena of knowing. Viewed from another perspective, political socialization is the way in which a generation passes on political standards and beliefs to the succeeding generation. It is through such a process that society ensures intergenerational continuity in political attitudes and values. So, this process operates at both individual and the community level.

In our study, we have sought to relate the implications of women's political socialisation based on the following social factors : childhood experience : specific events like social or political movements forming the adult political attitude ; influence of interactions with the individuals and regional culture. Our study analyses the socio-political background of women which highlights the familial, situational and structural constraints that prevent women from joining politics in Orissa. It is observed that women are initiated into politics by way of a complex two-stage process. A women's actual entry into political life, in this case, her decision to join a political group is determined by the same factors that induct men into politics. Depending on the basic human needs and drives, a woman is the ultimate person to decide her entry into politics. But, with a sex-based socialization, the situational factors play a dominant role in initiating women into politics. It is observed that psychological, situational variable and political socialization account for the political involvement of women.

The study examines women drawn from various parts of the state. Within the limits set for the study, it includes women from the widest possible range of public activities in Orissa from 1930 to-date. The history of women's political participation in India coincides with their interest and involvement in the freedom struggle. This is why we date our study to 1930.

The purpose of this study is to analyse the socio-political factors which impinge upon women's participation in politics. With the recognised fact that women form a tiny minority within political elites, the questions arise ; who represent women ? What is their background ? What do they think about social issues in general and those concerning women in particular ? What are they able to do as effective members of a democratic society ?

The objectives may therefore be spelt out in order : to study the socio-economic and political background of political women as contrast-

ed with a-political women ; to find out the pattern of childhood experience and political socialization inherited by the political women ; to assess the scope and extent of women's participation in formal politics and in community development activity ; to examine the social outlook and awareness of women members on their role in society, in the areas of education, employment, marriage, family and politics ; and to identify factors which may help or prevent women from playing a more effective role through political participation.

In this study, I have taken what may be broadly called a purposive sample of women in public and political life of Orissa. In this selection process, I consulted the official records available with the Central and State Government, Central and State Legislature, Local Self-Government bodies and professional associations. Besides, I was able to select some women respondents through personal contacts. The respondents shared certain common characteristics such as an urban upbringing, some educational attainment, and an upper or middle caste background. In a very broad sense of the term, we may call these "women elites". The sample chosen for the study has not included rural women excepting the members and office-bearers of the Panchayat bodies.

The total sample of the study included 200 women. This sample has been divided into three sub-types. They are "Political Women" (50), "Women Activists" (50) and "Indifferent Women" (100).

I may now define the categories chosen for the study. The level of women's political involvement varies widely. The first category of respondents is termed "political women", a term which is similar to "political man". "Political women" are those who are involved in active politics, sometimes elected to different local, state and national political bodies. These women generally have taken leadership in political activities. They are also in the hierarchy of different political parties, in a position to influence other women. Fifty members were proposed to be taken from the category.

In public participation, the second category of women, "Political Activists" are not totally free from formal politics. They have a strong zone of influence. They are responsible, committed and action-oriented people. Some of them play an intermediary role through active participation in campaigning, protesting, political party and organisational activities. Some of them even refuse to consider involvement in political activities or membership in political parties. They believe in serving people outside a political platform in various other ways. Fifty members were proposed from this category.

"Indifferent women" form the last category in my sample. They are mostly the educated women. Most of them are professionals who are active in bureaucracy, education, judiciary, mass media and business. Even with their wide involvement in public life, they are indifferent to politics, and thus, called "indifferent women."

Chapter-1 includes a discussion on concepts, assumptions and methodology. Chapter-2 undertakes a review of the relevant literature on women in politics. This review includes writings and reports on women. Chapter-3 refers to the socio-demographic background of women in state politics. Chapter-4 extends the theme of Chapter-3 with statistical informations on women in political life, both during pre-Independent and post-Independent Orissa. Chapter-5 enquires into women's participation in the Local Self-Government, Women's Associations and Trade Unions, Chapter-6 investigates the socio-economic background of the respondents on personal and familial level. Cross-tabulation between various socio-economic variables is made use of. Chapter-7 has analysed the political socialization, political mobilization and political motivation which have facilitated women's entry into politics. Chapter-8 has examined the extent of socio-political participation of the respondents. Chapter-9 has studied the social outlook and awareness of the political and a-political respondents. Lastly, Chapter-10 has provided an overview of the theoretical and empirical dimensions of the study.

The substantive contributions of my study may be evaluated against the following conclusions. As it clearly emerges, all the elitist women are not necessarily politically oriented, but their privileged background proves relevant to the women involved in politics. The experiences of political socialization and politicization play an intermediary role to transform the elitist women into political women. In the process, political motivation provides an impetus to women's initiation into politics. The women in power politics are not psychologically different from their male counterparts in the state. In spite of the differences in the socio-political backgrounds, the political and a-political women share a common progressive outlook and awareness.

Kinship and Power Structure : A Comparative Study of Mundas and Oraons in Bihar

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Sup : Prof. K.L. Sharma

The present study focuses on the relationship between kinship and power among the Orans and the Mundas in the two villages of Chotanagpur region in Bihar. The basic assumption in the study is that the kinship is not simply a system of ascriptive status and the social ranking but it also implies the position of power and prestige. In fact, the very kinship-based ranks inhere a hierarchy of power. It was thought that the tribes in general have not been much affected by the forces of social change and therefore the Mundas and the Oraons have also remained close to their traditional sanctions and the normative orientations. It was thought so despite the fact that some of the tribes of Bihar had been influenced by the British Raj, industrialization and Christian missionaries. The selection of two villages—one having the numerical preponderance of Mundas and the other—of the Oraons—was made to facilitate the comparisons of the two communities in terms of role of kinship vis-a-vis the forces of the social change. It is not that we have studied these communities separately as totally cohesive units, but in fact, we have studied all the sub-units within these communities, namely, various clans, lineages, families and individuals with a view to assess differential role of kinship and the forces of social change. In fact, our study amounts to an understanding of interaction between what we may call here tradition and modernity. The fact of the matter is that it is difficult to make a clear line of demarcation between the forces of continuity and the processes of change. Therefore, our main concern is to see the dimensions and ramifications of the interaction.

The two villages, we have selected are Chikoni in Lohardaga district and Kadama, in Ranchi district. The village Kadama is a Munda village and the other is an Oraon village. The large number of Mundas have been influenced by Christian missionaries and various political reform movements in Chotanagpur region for last 150 years

and so. The Oraons, though not influenced by Christian missionaries, are very well aware of the impact of Christianity on the Mundas. They are, however, influenced considerably by various governmental programmes and activities of the Congress party. These differential sources of the impact have kept them isolated from each other, but the two have been in thick of present day power politics. The two have maintained their respective traditions—rules of inheritance, the pattern of deference based on status within the family and outside. The non-convert Oraons have remained more akin to the traditional structures compared to the Mundas converted to Christianity. The recent writings also show that the Mundas have been in forefront of Jharkhand leadership which has been demanding the formation of the separate state of Jharkhand for the adivasis from Chotanagpur, Santhal Pragnas and from the adjoining districts of the states of Bengal, Orissa and Madhya Pradesh.

In the first Chapter, we have given a comprehensive review of the relationship between the kinship and power. We have examined the hypothesis that kinship system is a political system in the traditional tribal societies. This hypothesis raises the point about the differentiations between kinship and power. The implication of hypothesis that kinship inheres power is that the ranks according to kinship amount to differential distribution of power and privileges. The other implication is that if kinship rank amounts a position of power, a tribal society remains basically a corporate group. Further, ascriptive solidarities become crucial for determining economic and political relations. Individual becomes subordinate to the corporate character of the tribal communities. We have discussed, in this chapter, the two models—organic and segmentary. The first implies corporateness and interdependence of the various segments within the communities and the segmentation implies, no doubt differentiation but at the same time, it implies isolation and autonomy of a tribal community. In case of the tribes of Bihar, we have investigated that none of the models is adequate enough to take into account the totality of situation prevailing today. There is a great deal of interdependence and organic ties between the various segments of the given tribe and also it has interdependence upon the other village and tribal communities. On the other hand, there is not much interaction and dependence between different tribal communities in the same area. They are found as 'isolated wholes'. We have seen in the context of Jharkhand movement that the counter movements have been launched demanding the revival of traditional tribal culture with a view to restore 'aborginality'. Perhaps one of the reasons of the failure of these movements is the lack of inter-tribal cooperation and understanding. However, our main emphasis in the first chapter has been

on the various approaches and models applied in the studies of kinship and power.

In the second Chapter, we have given a comprehensive picture of tribal society and polity in India. Main points refer to hierarchy of power and variations in tribal societies. Stratification in a given tribal community and its segmentary character are two most important points which have been taken into account by social and cultural anthropologists. At the same time, we have seen the impact of exogeneous factors of change, namely caste system, Hinduism, Christianity, Islam and modern political institutions which have made inroads into insulated tribal communities. In case of Bihar, the 'isolationist' view about tribes is not very meaningful in the sense that the tribes have been exploited by Hindu zamindars and Bengali money lenders and the forest economy was taken over by the British administration. The tribes of Bihar have also rebelled time to time against these forces which interfered with their social economic and political set ups. The fact that some tribes and some sections of other tribes have remained isolated in the sense that they did not convert to Christianity, that they have high degree of migration, that they do not have a significant level of education and they still depend upon agricultural and forest based pursuits, proves that kinship plays a significant role in their lives and kinship also becomes a source of power. The chiefship has been found more effective institution among the tribes who have remained more isolated. We have cited here several examples from the north eastern region. The chiefs among some of the tribes are still considered undisputable leaders. The same is true for some other tribes from the other parts of India. These chiefs have retained the traditional powers and corresponding to them, large houses and the other assets including wives. Some of the chiefs have even been allowed to retain their judiciary power. In Bihar also, the traditional village chiefs—Manki, Munda, Pahan etc.—enjoy semi statutory positions. However, by virtue of being village chiefs based on kinship relations, these leaders do not get charismatic power automatically. The institution of charisma has generally been found independent of the kinship system. The charismatic leaders have given a lead for some change, reforms, or for revival of the decaying norms and practices. The Parha system, certainly, for example, among the Bhumij, has the relationship with the kinship system. We have found several parallels between the political systems of the Bhumij and the Bhils. Our attempt has been to give a detailed account of the tribes of Bihar in terms of their population, districts and the areas in which they are found and compare them with the tribes of the other states.

We have discussed the institutions of Parha among the Mundas and Oraons, Manki among the Hos and the village councils among the Santals in somewhat details in the last section of the second chapter. We have found a great deal of coincidence between the traditional heads and the statutory heads of the village councils. Now, there is hardly any conflict between the traditional institutions and the modern statutory village councils. Most of the studies revealed that the tribes in Bihar have traditional village councils. The studies also reveal that these councils function at two levels—village level and the inter-village level or Parha level. Also, there are traditional councils at the level of a given tribe and at the inter-village level. Further, these studies show that the traditional village authority is quite effective. The new power structure has impinged upon the traditional quality but at the same time, the latter, has not been reduced to the level of insignificance.

In the third Chapter, we have analysed the pattern of kinship and power among Mundas and the Oraons. We have also analysed the historicity of the tribal communities in regard to kinship and power. Both the Mundas and the Oraons have changed to a great deal as they have adopted the Hinduism and Christianity. Only about 20 per cent have remained clinched to their religion. The Christian missions have played a significant role in converting the two communities to Christianity. Adoption to Hinduism has come as a reaction to the conversion to Christianity. Those who have not converted to either Christianity or Hinduism and are adhered to tribal religion, have perhaps done so with a view to their tribal culture, ethnicity and identity. These points have been maintained by eminent scholars including S.C. Roy. It is a fact that conversion to Christianity brought about a greater awakening, more education and improvement in economic condition of the tribes of Bihar. Not only the tribals rebelled against zamindars and money-lenders, but they also raised their voice against the British Raj. The role of 'tribal identity' was no less in mobilization against these exploiters. Even today, the mobilization for the formation of a separate state of Jharkhand is rooted into the tribal identity and segmentation. As we have stated earlier a unified Jharkhand movement representing all major tribes of Bihar has not emerged precisely because of lack of inter-tribal cooperation and understanding. In light of these facts, we have discussed in this chapter the sardar movement, the Birsa movement, the Tana Bhagat movement, the Jharkhand movement and the role of the Mundas in particular. We have discussed at length the state of economy, the polity, the religion among the Mundas of Bihar. Similarly, we have discussed, in details, the social origin, the economy, the polity, the religion and the other aspects of Oraons. Special feature

of the discussion on Oraons is the analysis of their Parha Panchayat, the clan organization, lineage hierarchy, the institution of inheritance, the Dhumkuria institution, the Pel-orpu etc. We have also discussed their cultural organizations with special reference to birth, marriage and death. We have concluded by arguing that despite conversion to Christianity and the contacts with outside world these communities which have been at the fore-front at the various movements, have not changed much in regard to their social cultural organizations. They have accepted the new polity and economy and have amalgamated to a large extent into their traditional set up.

The fourth chapter gives a detailed description of the local of studies, namely, Chikoni, an Oraon village and Kadama, a Munda village. Chikoni consists of 64 families with a population of 290 members and Kadama consists of 92 families with a population of 412 numbers. The main features of this chapter are a description of the type of houses, social organization, employment patterns, family-size, land-ownership etc. We have found that a few Hindu-families, who lived in these two villages, are not only more per capita land holders, but also have better land and a higher economic standing than the Mundas and the Oraons. However, not much conflict we have witnessed among the tribals and non-tribals among these villages.

The Chapter five focuses on the kinship and power structure among the Mundas of Kadama village of Ranchi district. We have discussed the two principal divisions of Mundas, namely, Khangar Munda and Komput Munda. These two are treated as two distinct social entities. Their distinguishing features are endogamy occupation of a common territory and the differences in the religious beliefs and practices. There are also minor differences in regard to the dialects they speak. The Mundas are generally not conscious of their divisions—Kompas and Khangar. The feeling of Mundas solidarity is very strong and cuts across the village boundary. There are about 340 clans among Mundas as reported by Sir Risley. The number of clans among the Mundas has been reported differently by different scholars. The Mundas clans are totonistic. Clan exogamy is strongly found among the Mundas. We have given the composition of different clans in terms of families on page 260. There are 11 clans among the Mundas in Kadama village. The dominant clans enjoy more social and political status than the less dominant ones. There are also sub-clans among the Mundas. We have given a description of the sub-clans of Suria Mundas on page 265. A chart on page 263 explains a social organization of the Surin clan in terms of its sub-clans and lineages. The other points which we

include are the nature of family organizations namely patterns of residence, the rules of inheritance and the institution of Parha Panch. We also discussed several other institutions such as Munda, Pahan and Mahto. In the last, we have given six cases to illustrate some of these points. The efficacy of the Parha system is reflected through the meetings which are organized and in which the members participate. We have concluded this Chapter by realizing that kinship functions at various levels with corresponding levels of power hierarchy and the distribution of privileges. It seems that there is no noticeable conflict between the levels of functions of kinship and the levels of exercise of power and distribution of privileges. And, therefore, corporateness could be seen at various levels—at the level of family, lineages, sub-clans, clans, tribe and Parha. There are in built organic linkages between these levels of social and kinship organizations. It is in this way the kinship remains basically an institution of social organization and also an institution of distribution of power and privileges. Such a system ensures not only continuity of ascriptive principles, but also insulates the community from the rest of the world and all changes through the exogeneous sources can be brought about within the framework of such a social organization.

The next chapter focuses on the kinship and power structure among the Oraons of Chikoni village in Lohardaga district. We have discussed here the clan, the lineage, the Soukhia system, the village panchayat, the institution of Pahan, Mahato, the familial relations, the inter-village relations etc. along with the stresses and strains which they have been witnessing in the recent years. Like Kadama, Chikoni also has corporateness at various levels within the village and at the level of inter-village organizations. The village is the most significant unit exhibiting corporateness and within the village the lineage is a focal institution of carrying corporate activity. Fulfilment of mutual obligations in the village and the lineage is taken for granted. Lineage solidarity is taken as a sign of the strength of its members. Similarly, the village solidarity is treated as higher level of corporateness in comparison to other villages. The lead to these 'corporate' endeavours is given by the heads of the lineage and the village respectively. However, this system of corporateness has been under stress since the advent of British Raj and the intrusion by outsiders in economic and social life of the village people.

Finally, we have discussed the nature of the leadership among the Mundas and the Oraons in terms of change in traditional tribal polity. Theoretically the leaders in the two villages are elected through

the democratic processes. The new leaders should represent the norms and expectations of modern polity. However, we have found in both the villages, the new leaders who have been elected through elections, have come from the traditional dominant clans and lineages. Even the villagers named those leaders who represented maximum traditional values and religious practices. The other categories of the leaders include Mahato and Munda. These leaders in fact have been successful in getting control over the statutory panchayats. We have called them the traditional secular heads of the village panchayat, precisely because of the combination of the old and the new values, we find in them. A number of new institutions have come up in recent years in two villages with the introduction of Community Development programme, Panchyat Raj, cooperatives, schools and other welfare agencies. These institutions have not been effective to attack the amalgam of the traditional and the new forces. In fact, these agencies have been successful to some extent only with the cooperation extended by the traditional leaders. We have identified 24 such leaders in two villages to represent the old and the new values simultaneously. We have given in this chapter the detailed social background of these leaders and their characteristic features.

Lastly, today, a tribal society cannot be treated as a corporate group in its entirety. Its organic solidarity is not absolute in nature. The organic model facilitates corporate character of the tribal communities of a given area or a given tribal village and its various components. The segmentary model allows us to understand the tribal society as an independent entity, hence the nature of prevailing isolation among tribes in general and in these tribes in particular. Both the approaches are necessary to understand the tribal society in entirety. We have debated the application of the two together. With the application of the mix of the two approaches, we have been able to analyse the community of the traditional tribal culture and the absorption of the new forces of changes in its fold over the last several decades. Our emphasis has been on the comparison of the two tribal communities in regard to various facets of their lives namely kinship and power, and stresses and strains, which these two have undergone in general since the British rule and in particular since Independence.

Tamil Migrants in Delhi: A Sociological Analysis of the Styles of Adaptation

Anand Inbanathan

Sup: Prof. T K Oommen

People of sedentary societies remain in the places where their communities and generations of their families had lived, following a style of life that had been inherited. Changes brought about in these societies, in normal times, are adaptations to their respective environments, and do not usually involve drastic changes in their life styles or a change of residence. Migrations are undertaken by individuals or groups, or on occasion a whole society, only when they perceive their lives in these places as being too insecure, or being deficient in providing the means of a comfortable livelihood. In an alternative situation, members of a society see another place as being one with better facilities and conditions for an improved standard of life, and this proves to be an attracting force. In either event, the people who actually choose to migrate to a new place are generally a small group of a society. Once these people move to a new place, there are necessarily some changes that come about in their life styles, through a change in environment, and an adaptation to the new environment. The styles of adaptation adopted by migrants depend on various factors. These include their historical backgrounds and cultures, their styles of life in their former places of residence, the number of migrants of a group who migrate and settle together, the cultures of the host societies, and so on.

The people of Tamil Nadu have a long history of migration. These, in the past, involved small groups from various sections of the Tamil population who had travelled long distances to other countries and for different reasons. For instance, the migrations of Tamils centuries ago to Sri Lanka and Malaysia were mostly of the higher castes and members of trading communities. They had established small settlements in these countries to enable them to continue their trading activities. More recent migrations of Tamils, from about the middle of the 19th century were to a large extent that of the lower castes, and the poor and destitute, who went to many countries as indentured

labour to work on plantations and government projects as unskilled workers. Many of these countries have continuing communities of Tamils, mainly the descendants of the migrant labourers. The adaptation of these migrants depended on the conditions that they encountered in these countries, and also the fact that they represented a poorer and less educated section of the Tamil people. In countries such as Sri Lanka and Malaysia, the Tamils who worked in plantations settled in groups of their own castes, and lived out their lives in fairly similar styles as they had done in their ancestral villages in Tamil Nadu. There were some changes brought about through their participation in a plantation economy, but they were still able to preserve much of their natal culture. This was possible in the relatively isolated plantations of these two countries to a greater extent than in a country such as Guyana where extraneous factors had made it less feasible for them to continue and maintain their original culture and had to make considerable changes to their life styles. These migrations of Tamils to other countries and the styles of adaptation in them are considered in the first chapter.

Tamils who migrate within India have different conditions to face than if they migrated to another country. The fact that the Indian Constitution does not make any demands on people of different communities to conform to any specific life style, and the right of every Indian to settle in almost any part of India that he chooses, has made it possible for the migrants to live in a style that they devise. Their adaptation, however, has the limitations imposed by their economic conditions. To the extent that is possible, most communities try to preserve in the new environment as much of their natal culture as they can. Of the Tamils outside Tamil Nadu, one notices a relatively larger number of Tamil Brahmins on the one hand, and a large number of migrants from among the lower castes who in many cases are also very poor. The styles of adaptation of the Tamil migrants involve many conditions that different groups face through their socio-economic status. The poorer people among the migrants, especially those of the lower castes and backward classes usually live in slums of the cities to which they migrate. The life styles of migrants in slums and also the adaptation of other migrant groups who travel to a place within their own country's borders, are considered in the second chapter.

The third chapter is on the people of Tamil Nadu, the Tamils. There are three major groups in Tamil society; the Brahmins, non-Brahmins and Adi Dravidas. Brahmins constitute about 3% of Tamil society, the Adi Dravidas are about 18%, and the remaining Tamils are

non-Brahmins (and includes also non-Hindu Tamils). The positions of the Brahmins and the Adi Dravidas in the Tamil social hierarchy are relatively unambiguous. In former years there was a close correspondence between the occupations of these groups, the Brahmins being predominantly connected with religious matters as priests, scholars philosophers and so on, which placed them at the highest position in society. The Adi Dravidas were engaged in the most despised and onerous occupations, considered "polluting" in some cases, which placed them at the bottom of society. 'Non-Brahmins' as a distinctive category, including the castes that fall between the Brahmins and the Adi Dravidas came into existence only with the onset of the anti-Brahmin movement in Tamil Nadu (Madras Presidency, during the years of British rule). Earlier, there were only individual non-Brahmin castes and not a group of non-Brahmin castes which called themselves as non-Brahmins. There are differences in the life styles between these three major groups of Tamil Society.

In the migration of Tamils to Delhi, however, the proportions of the three major groups of Tamils do not correspond exactly to their relative proportions in Tamil Nadu. The Tamil Brahmins appear to be the largest section of the Tamils in Delhi, and another large group is of the lower castes (the Adi Dravidas) and also the backward classes. The non-Brahmins are in lesser numbers than in Tamil Nadu. For our purpose, it was found more useful to consider the Tamil migrants in Delhi in three categories which included one of Tamil Brahmins, a second which was of the Scheduled Castes and Backward Classes who live in slums, and the third was of the non-Brahmins and non-Hindus who are of the middle and upper classes. This categorization was found to be more in conformity with the existential conditions of the Tamil migrants, and involved a consideration of both their social positions in Tamil society and their castes, as well as their economic positions. The study was thus the styles of adaptation of the different Tamil groups in Delhi, keeping in view also their different styles of life in Tamil Nadu.

Methodology

Since the study involved three groups of Tamils in Delhi, and with many variations among the groups so far as their styles of living were concerned, the methods chosen had to suit these conditions. Thus a survey was not considered as an adequate technique for the study. While there was a need for details, the key informant technique was found more useful for the collection of data. This technique, however,

has certain limitations. The most important is that when one gathers information from a few members of any group, there is no way of being certain about how far the generalizations derived from these key informants would be applicable to the whole group. A method by which one can find this out is to conduct a survey of a larger section of the group studied. This survey, however, could not be conducted due to the limited resources at my disposal.

Initially, a questionnaire was formulated to draw up a profile of the Tamil population in Delhi. There was no possibility of getting an entirely random sample of the Tamils (of the middle classes and the higher castes) due to the fact that no institution has a large enough number of Tamils in their list of members. In addition to this, it was also found that Tamils are not usually accessible to a total stranger, and it was necessary to get prior introductions before the persons could be asked to complete the questionnaire. However, there was a fair number of persons who were given these questionnaires, and from a perusal of the answers in the questionnaires it was possible to choose a few key informants.

Tamils of two groups, of the Brahmins, and the non-Brahmins and non-Hindus in the middle and upper classes, were found in middle income neighbourhoods, and spread out in different parts of the city. They were interviewed in their homes, and through visiting each home two or three times.

The persons in the group of Scheduled Castes and Backward Classes who were poor and lived in slums, were for this study, from Tamils in two neighbouring resettlement colonies which were specially set up by the government for the poor people. They were the trans-Jamuna colonies, which we have called Trivenipuri and Haripuri. The major portion of the study was conducted in Trivenipuri, and the data from Haripuri was used as supplementary data. The respondents and informants were usually met on Sundays, since this was their day off from work, and only a few of the Tamils remained at home during weekdays. In the case of members of this group, it was not easy or even possible to talk to Tamils individually, since there was always a gathering around the person who was interviewed. Although a few questionnaires were initially completed through talking to a few persons, the rest of the data were gathered through group discussions. In these group discussions many of the Tamils participated, and perhaps they found the presence of people they knew conducive to more freely expressing their views. These discussions were held outside the homes

of the Tamils, and on the streets opposite the homes. This was due to the fact that they lived in one-room houses which were usually occupied by the Tamils' wives, who were preparing the food for the family. Moreover, most of the families of the Tamils spent much of their time outside their homes rather than cooped up in the small space.

Theoretical Framework

The theoretical framework used in this study was of boundary maintenance. This scheme, developed by Fredrik Barth, assigns more importance to the boundaries that define the group being studied, and lesser importance to the cultural matter that they enclose. An important indicator of the boundary between groups is the social networks of the group's members. As Barth says, the identification of another as a member of the same ethnic group implies a sharing of criteria for evaluation and judgement. It thus entails the assumption that the two are fundamentally "playing the same game", and this means that there is between them a potential for diversification and expansion of the social relationship to cover eventually all different sectors and domains of activity. The recognition of some others as strangers or outsiders results in a limitation of the sectors of activity where the closest relations are conducted and maintained.

In addition to the conception of boundary maintenance, it was also found useful to incorporate the ideas of Lyn Lofland. She had made a study of the adaptation of people to the urban environment, and found that one of the ways that groups cope in a world of strangers is to form a "home territory" or "urban villages". The creation of "urban villages" is to have personal worlds in the midst of urban anonymity, by turning public space into semi-private enclaves. Urban villages include, (i) the spatially concentrated neighbourhood, and (ii) territorially dispersed villages. In both these cases the inhabitants know one another personally, their relations are long lasting, and are in short, the typical relations of a primary group. If these enclaves exist for a length of time, at least some of its inhabitants can not only avoid the world of strangers but can avoid even learning how to operate in a world of strangers.

Adaptation

The main features of the adaptation of the three groups of Tamils in Delhi are indicated below. The order followed begins with the Tamil Brahmins, then the Adi Dravidas and Backward Classes who live in

slums, and thirdly the non-Brahmins and non-Hindus of the middle and upper classes. This corresponds to the consideration of the groups in the fifth, sixth and seventh chapters.

Tamil Brahmins

Tamil Brahmins in Delhi occupy the middle and upper income positions in government and private concerns. They do not appear in the lower income category of slum dwellers in Delhi as some of the Tamil groups. For many years, Tamil Brahmins were the pre-dominant group in Tamil Nadu, through their position in the social hierarchy, their ownership of land, and their occupation of many of the positions available in the government bureaucracy. The position of they Tamil Brahmins appears to have reached a peak during the years of the British administration of the Madras Presidency. The anti-Brahmin movement that came about was the result of the resentment of the elite among the non-Brahmins who considered the Brahmin position as being detrimental to their own interests (i.e. to the 'non-Brahmins'). The later efforts to curb the avenues to Brahmins in education and government employment were to an extent successful, and some of the Tamil Brahmins migrated to other states of India, and to cities outside Tamil Nadu. However, though some of the Tamil Brahmins left due to the anti-Brahmin movement, from our study it was found that many of the informants and respondents claimed that the main reason for their migration was to get better and higher paying jobs in Delhi, rather than because of the anti-Brahmin movement.

In Delhi, on arrival (this was till about 20 years ago) the Brahmins had lived in concentrations in places such as Karol Bagh. This was a spatially concentrated village, in Lofland's scheme. This was necessary in a sense, to preserve their cultural identity. Till about 30 years ago, the number of Tamil Brahmins in Delhi was rather small. They did not have their temples in Delhi, and only a few Tamil Brahmin priests. Living in close and insulated communities, they interacted mostly with others of their own community. The boundaries between them and other groups were clearly demarcated not only through their language (Brahmins speak a distinctive form of the Tamil language) but also through their religious practices and the fact that they lived in enclaves. Nowadays, the Brahmins do not live in Tamil enclaves, but are dispersed over many parts of Delhi. This leads to various consequences. The first is that their social relations are not confined only to members of their own caste. They have to learn Hindi to be able to converse with the local people, and they would also mix more freely with the Hindi

speaking people in their neighbourhoods. Their customs may change over time, to some extent, though not much change has occurred till now. However, religious practices, which are insulated from outsiders and outside influences will resist change for a much longer period.

In the pat'tern of residence of the Brahmins, the earlier group-centred mode of adaptation, with social relations being restricted to members of their own group, has given rise to the dispersal mode. Now, the Brahmins have started to leave their enclaves and inter-relations with other peoples are more frequent than before. However, most of the closest relations are still with other Tamil Brahmins (specially of the older generation, and also the recent Tamil Brahmin migrants). Residential dispersal has not entirely eroded the Tamil Brahmin tendency to restrict their relations in certain spheres to their own group. They have continued with what Lofland calls the territorially dispersed village, where primary relations are within their own group, even if they do not live in the same limited space in enclaves.

The changes that are noticeable are in the second generation of Tamil Brahmins in Delhi, the children who are now in school or just finished their education in schools and colleges in Delhi. Their closest associates and friends are very often north Indians, whose native language is Hindi. The language that Tamil Brahmin children speak with the friends is also Hindi. The changes in the language that they speak is also a sign that they are slowly losing touch with their native language, and through that, the contact with Tamil culture. This has not taken place to a great extent, but the signs are most clearly visible in the children who study in elite schools, and who speak in English and Hindi, even at home, and not in Tamil.

Despite being dispersed around Delhi, there are still some colonies which have larger numbers of Tamil Brahmins. The common practice of Brahmins in these colonies is to form a Tamil association. This ensures that there is a greater contact between Tamil Brahmins in that colony. The cultural programmes and functions that are arranged by these associations not only get the Tamil Brahmins together but they also ensure that there is no break with Tamil culture through migrating to a distant place. Naturally, participation in these associations also affirms their Tamil Brahmin identity.

Scheduled Castes and Backward Classes (slum dwellers)

The members of these groups of Tamils were unanimous in saying that the main reason for their migration to Delhi was their acute

economic problems in Tamil Nadu. None of them suggested that their identity as members of the lower castes had anything to do with their decision to migrate. However, the fact that they migrated to Delhi is due more to the presence of other Tamils who had come to the city earlier. Living in slums and squatter settlements is an adaptation to their economic conditions, and the fact that even after migration, with limited education they do not have the opportunity to leave these slums though their incomes in Delhi are higher than in Tamil Nadu.

The style of life of these migrants has been preserved to a greater extent as it had been in Tamil Nadu. The two colonies Trivenipuri and Haripuri were on the outskirts of the city, and recently established. This made it possible for the migrants, evicted from squatter settlements within the city, to request that they be allotted plots near those of their own community members. The fact that the Delhi Development Authority acceded to their wishes has resulted in the Tamils being in concentrations of their own caste groups.

The social relations of groups in these colonies are restricted to within their own castes and they have virtually no social contacts with members of other language groups who live in the same colonies. Even relations with other Tamil castes are of a superficial kind and not particularly close. The only relations that appear to be strong are with those of their own family, community or caste and other Tamil who live in the same block as themselves. Tamils in different blocks of the colonies do not have much of an interaction in ordinary times.

Caste distinctions are carefully distinguished and preserved as they are in Tamil Nadu, despite the fact that all these people are poor and live in slums. A clear manifestation of the maintenance of distinctions between different castes that live in the different blocks of the colonies is that each caste worships in a temple that is in that block, and none other. Virtually all the temples are devoted to the goddess Nariamman, and are situated (specially in Trivenipuri) close to each other. Since each block has only certain Tamil castes residing in it, the worship in separate temples also denotes the differences of caste identity.

Being a group-centred adaptation, their style of adaptation is one of social closure, insulation and inward-looking. The residential pattern is one which in Lofland's scheme would be called a spatially concentrated neighbourhood. The individuals of these castes maintain primary relations within their own caste, and continue life in a style that most closely resembles what they left in Tamil Nadu.

Tamil Non-Brahmins and Non-Hindus

The Tamils of the remaining category, of non-Brahmins and non-Hindus (includes Muslims and Christians) in the middle and upper income groups are residentially spread around Delhi. Since most of these castes and the religious groups are not represented in large numbers, even from the beginning their residential locations have not been in caste concentrations.

The social relations of members of this category are more with persons of other Tamil groups than within their own castes. In addition to being Tamil, however, the relations are closest between those of the same educational and occupational level. Caste as a factor in the choice of the closest friends has relatively less importance, though language is of much more importance.

Compared to the other Tamil groups in Delhi, non-Brahmins and non-Hindus have been involved in a more individual-centred style of adaptation. Family and kin relations too are limited, by the fact that not many of the relatives and family members are in Delhi. However, this very fact has ensured a closer contact with Tamil Nadu. Voluntary associations and the like are fewer among this group, and the smaller number of caste members ensures a wider circle of friends among non-Tamil and different castes. Religious groups such as the Christians maintain closer contact with some who are not Tamil but are also Christians. The Muslims on the other hand, appear to have more of their close relationships with non-Muslims, and those who are also Tamils.

Close relationships with members of groups not their own do not imply that the boundaries between the castes and religious groups have disappeared. It appears that the boundaries are clearly demarcated by the fact that members of these groups marry those of only their own group, and more than in the case of the Tamil Brahmins, choose the bride or groom from Tamil Nadu.

A Sociological Exploration into the Phenomenon of Dowry in a Metropolitan City with Special Reference to Delhi

Madan C. Paul

Sup : Dr. J.S. Gandhi

The idea of a woman to receive marriage gifts (*Stridhan*) from her natal kins is a part of the sacred cultural concept of *Kanyadan* hyper-gamous form of marriage system has been prevalent in India since ages. This form of marriage with *stridhan* (women's property) has been practised usually by the people of upper castes and class of Hindu social order. That is, it is practised by those who have command over socio-economic resources of the society to demonstrate and validate the family status.

Dowry in the present form and content to the bridegroom and his kins, is nothing but a reverse form of the traditional prescription of *stridhan* to women. This is not a chance event but a product of emergence and development of socio-economic forces encouraged by the colonialists as well as the post-colonial rulers. In other words, it is a product of dynamic interaction between the traditional prescriptions and modern socio-economic compulsions of inequal development of transitional society. Now, dowry acts as an index of socio-economic status of the donor and the recipient. It is also a means of control and obligation. Thus, the classical notion and rationale of *stridhan* to women and a token *dakshina* to bridegroom is taken deviational forms. Thus, the concept of *stridhan* to women is no longer accepted as an adequate descriptive model of payments made for marriage bond in contemporary Indian society. This is because the *stridhan* given to her is no longer possessed by her with jural rights in real sense of the term. The modern consumerist society reinforces the dowry-based marriages to acquire or maintain status and prestige of 'new rich' (*nouveau riche*) sections of society.

The phenomenon of dowry has both the theoretical and empirical significance in modern time, has not extensively been studied by the

sociologists and social anthropologists. As the material available in the form of census data and other documentary sources are not sufficient for sociological exploration into the phenomenon of dowry in Delhi, we have conducted a field study of a number of sampled households. In fact, this constitutes the principal source material for our analysis. We have drawn the representative sample from the universe by using simple random sampling method from the total number of 443 households in different blocks of the Qutable Enclave I & II (South Delhi) housing complexes of Delhi Development Authority.

We have selected 200 households (45%) and either a married male or a female has been contacted from the each sampled household for the purpose of collection of data both quantitative and qualitative in nature. Main tool for collection of primary data was through the questionnaire schedules consisting of both the structured and unstructured questions. This was followed by informal interviews to elicit the qualitative responses relevant to the study. We have pretested the questionnaire schedules before administering. A partial participant observation method was also adopted. We made use of available secondary materials for conceptual perspectives.

As it came out in our study, the transaction of dowry in urban Delhi is influenced by several factors like education, social position, economic status and demographic characteristic. This is increasingly practised even by those who never practised it earlier. It is mechanism of actualisation towards that end. Thus, by and large, dowry is increasingly resorted to as a prestige symbol in urban Delhi. However, some people feel that the practice of dowry is due to greed of the bridegroom and his in-laws.

The commercial advertisements, *mahangai* (rising prices), and availability of consumer products of sophisticated and fashionable technology without ready availability of means at their disposal to realise this ambition of possession make some people utilise marriage as an appropriate opportunity for this purpose. Thus, they dictate terms to the parents of the prospective bride, realising their weaker points and position in the marriage market.

The richer sections both expect and give more dowry than their poorer counterparts and also spend lavishly in pomp and show. Thus, demonstration effect infects the people belonging to lower socio-economic standing. As a result, it becomes a generally shared social and cultural norms of the entire society. To the affluent or prosperous

family this, therefore, becomes a matter of prestige to promote or organise high dowry-marriages so as to be able to show-off before their folks and/or neighbours. That is why, many respondents said, they have to 'live up with the zones'. It, thus, becomes a matter of cultural compulsion and status actualisation for them in the midst of new characteristic socio-economic inequalities.

The tendency of a lowly placed group in the society to try to go up the social ladder by using marriage as a dowry-opportunity, that makes this dowry-based marriages an oppressive system. Moreover, for those who have unaccounted money it affords a readymade opportunity to legitimise their resources in this game of match-searching from the females of commensurate or asymmetrical socio-economic standing. But, for those who cannot pay or bargain, it is nothing but a social oppression.

Place of birth and more particularly, belonging to an urban milieu is a factor. The urban-born people transacted higher quanta of dowry than their rural counterparts. It is reiterated that the urban-born bride-grooms are in a better position to dictate the terms to the bride's family than their rural-born counterparts to the urban-born bride's family. The people of Delhi metropolitan city in particular enjoy a superior air of their own. Those who are placed here automatically feel a bit arrogant towards others because of the fact that they live in a place of importance and opportunities.

The study also shows that the people from nuclear households have transacted higher quanta of dowry than their counterparts from joint households with slight variation. Moreover, dowry is proportionately higher among those whose marriages are arranged and this is particularly true in the case of females who are not employed and dependent on their husbands. In fact, we find an apparent increasing trend of dowry since 1970 through our study.

Most of the respondents though claimed themselves to be 'modern' in outlook, yet feel that caste is important in marriage. They maintain that, as Hindus, they should follow their traditional stipulations in marriages, i.e., hypergamous form of marriages. However, the contemporary conventions and compulsions, such as the acceptance of dowry, also have to be taken into account. Although the principle of caste endogamy in marriage holds undisputed sway, yet within its fold different social classes have different considerations.

Female respondents, by and large, feel that share in parent's property would bring down the dowry quantum. Most of the urban-born immigrant females are interested to have share in parent's property and most of them got transference of dowry as an indirect form of property share. But most of the females from the poorer sections questioned what would happen to them as their parents do not have any property to share? Some females pointed out that it is customary to transact dowry as Sita of *Ramayana* Epic. So, they also got transaction from their parents. As ideal *Pativrata* women, they also do not identify themselves independent of their husbands. Thus, it is also this attitude that has encouraged to perpetuate dowry transaction.

Some women wanted property transference to their conjugal household to shut the mouths of the in-laws or apprehended harassment from them. They said it is very difficult to know the mothers-in-law beforehand before marriage. Some said, sometimes women become the enemies of theirs. They also feel that the socio-economic oppression a mother-in-law undergoes makes her to oppress the new bride. Moreover, 'cultural lag' and insecurity of modern life, many a time, force the mothers-in-laws to find faults with the new bride. The result is the resort of more dowry from the natal home to shut the mouths of in-laws and thus to save the prestige of dependent women. Dependent women suffer from this problem more than their independent counterparts who are in a better position to deliver the means whenever need arises. The majority of employed women are not interested in parents property unlike their counterparts who are housewives.

The majority of women respondents, whose husbands are in professional or executive and white collar occupations, had high incidence of higher quanta of dowry transaction from their natal families. Similarly, the majority of them who are employed in professional or executive and white-collar occupations had transaction of higher quanta of dowry as symbol of prestige. They pointed that the bridegrooms' families never insisted on it at the time of their marriage. In fact, what we find is that the quantum of dowry is higher among the financially dependent women than their independent counterparts.

The women belonging to twice-born, clean-but-not-twice-born castes and the Sikh (non-caste) community said that they had the transaction of higher quanta of dowry because the prestige of parents was involved in marriage. The same thing was reiterated by the women who obtained educational levels upto graduation or higher levels. Moreover, those who are in nuclear households have transacted dowry in

higher proportion than their counterparts in joint households. The occupational mobility has encouraged the disintegration of joint family. Now, nuclear settlement costs more in the inflationary economy and it is becoming increasing tendency among certain sections to settle only after marriage. There is a tendency among the women of middle class to take up jobs to accumulate resource for dowry to attract desirable bridegrooms. It has both utility and status elevation considerations *Izzat* becomes an important aspect for the women and the transaction of dowry follows as per the definition and meaning of *izzat* one conceives of.

The majority of the rural-born women were thinking of not marrying boys who demand dowry compared to their urban-born counterparts. A higher proportion of urban-born women reported that the bridegrooms' families insisted on dowry and that is why they had to transact dowry unlike their rural-born counterparts.

Dowry is increasingly resorted for making marital alliance in the Indian society and it specifically holds true for the universe under study. In fact, our observations on dowry and other related issues are specific to an area in Delhi. Dowry has taken a certain uniform shape and it is being used to as a mechanism for promoting or safeguarding '*izzat*' (prestige) both for the donor and recipient families. This, very often than not, is reiterated by the respondents. They have stated that without dowry, marriage of a daughter cannot be thought of in these days in Delhi unlike in the past. Thus, it is increasingly becoming an instrument for demonstrating and validating the family status. The question of family status is more 'relevant' among those people who have acquired prosperity of late and enjoy a better socio-economic status.

The cultural ideology of *Kanyadan* marriage is ingrained in the mental make-up of the people of different strata, particularly among the affluent and upwardly mobile sections of society in urban areas. In fact, the new institutional structures like educational, occupational structures, could do pretty little in changing the deeply ingrained cultural elaborations of dowry marriage. On the contrary, in the context of a developing free market economy with cash nexus as its core component rather converted all the traditional and 'modern' institutions in the service of greed and aggrandisement.

The general spread of ideology of dowry-based marriage down the various social levels makes it very severe for the people at the lower rung of social ladder to maintain this practice. Yet, the expectations

from them by the receiving families continues to be high and forbidding making life for less affluent or not-affluent miserable. Secular considerations of occupation and property play a pre-eminent role in the choice of marriage partners from within the caste group. Thus, it is mostly socio-economic position of the bridegrooms that would dictate the dowry quantum and not the socio-economic position of the women. This shows the lower status of women in the prevailing socio-economic order of Indian society in general and urban society in particular along with its concomitant oppression both within and outside the household in a broader society.

It is this situation that has made the occasion of marriage an occasion when the status of a family is put to a severe test. Indeed, marriage in India, by and large, is arranged where traditional prescriptions and modern economic compulsions are synchronised along with the new value orientations and life-style. In other words, the dynamics of both traditional values and modern social and economic forces encouraged a sense of competition between the parents of two parties to manoeuvre each other in the marital alliance making. It is this patterning of *marriage de convenance* that has brought new meaning, content, and purpose of dowry among people of different strata. And it is taking a prominent role in marital alliance making by lowering the status of women to wealth in Delhi. Thus, it becomes, in clear terms, an opportunity for some people to lower the position of women to go up the ladder of social prestige leaving behind the other half of the society.

Now, the treatment of a daughter in in-law's house depends upon the quantum of dowry transaction before, during and/or after the marriage. And it again depends upon lots of other determinants either singly or collectively. The institutionalised form of hypergamous marriage which stipulates the formal superiority of bridegroom's to that of bride's family has made dowry to play the role of an equaliser. In other words, the equalisation is made through the transaction of dowry by the bride's to the bridegroom's family. It is this cultural elaboration in consonance with the new characteristic socio-economic inequalities that made the dowry to take a prominent position by lowering the status of women in a male-dominated free market society. Thus, a marriage is nothing but a comparative weighing of status factor that is built into the process even though it is 'not exclusively a matter of kinship'. It is here that dowry plays a compensatory role depending upon the attributes of advantage one group has over the other in a transitional urban society of India.

However, command over socio-economic resources facilitate a person to actualise his/her interest in the marriage market. The inflationary trend and overplay of free market forces overpowered the women as commodities. This can be seen from the increasing marital advertisements of decent dowry marriage and the depiction of women as sensual objects in the mass media. An attitude is thus constantly shaped to take women as inferior appendix to men. Some women are also responsible for perpetuating this degraded attitude when they display themselves in the 'beauty shows'. The availability of new products variety heightens the aspiration levels and without these marriage is not 'prestigious' both for girls and boys. And 'no-dowry' marriage means abnormality. In fact, the quantum of dowry is increasing with the inflationary trends in the economy and the availability of variety of luxury goods in the free market as well.

Education, instead of acting as a change-mover, is becoming a catalyst for dowry practices. This is clearly demonstrated in our study. By and large, dowry is prevalent more among the 'new rich' and educated sections than it is otherwise. But this is to be rigorously explained through further study by the researchers. The reason might be that the present educational system is a mere extension of colonial educational system where degree and certificates are important and valued, and not the man-making educational for societal goods. The present multi-tiered educational system brought to surface various status groups who are absorbed in different occupational structure with accompanied status syndrome. Dowry is proportionately higher among those who are in non-manual occupations than in the manual ones.

Thus, the place of occupation and, in particular the non-manual white-collar and professional or executive occupations are highly valued in the dowry-based marriage market. Dowry is also higher among those who are in higher occupational categories. This brings us back once again to the secular economic instrumentality of dowry and it is being both an indicator as well as a vehicle of socio-economic mobility in the characteristically inequal social order. Emphasis on dowry in marriage has been increasing and this means that there is no substantial change in the status of women. For sometime to come dowry is to continue despite the fact that there are legislations against it.

Post-independence India passed several legislative laws to undo the societal anomalies and the women organisations have also been arguing for greater bargaining power to them vis-a-vis men and the wider society. They have been struggling for getting certain favourable

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legislations passed for the protection of women against oppression but, notwithstanding this legislative realisation the changes are not likely to come automatically with regard to dowry. This is so because the legislative reality is external to the social circumference within which most of the Indian women lead their life of trials and tribulations. The translation of law in reality can only be through a modified perspective of egalitarian social order for which a different type of socio-cultural revolution is called for so that women can be regarded as prospective partners. In view of the imposing and sobering realism of our findings we may say that such a revolution is yet far away but it may not be an illusion if both the constituents of society-men and women-together take a crusade against the dowry system along with egalitarian social order.

Protestant Missionary Attitudes Towards Higher Education and Nationalism in Madras Presidency, 1872-1930

A. Mathew

Sup : Prof. S. C. Ghosh

The introduction of Western ideas and influences had a farreaching impact on the intellectual, religious and political spheres of Indian society. In the introduction of these ideas and influences, the role of the Protestant and Roman Catholic missions has been a very crucial one. More than the Catholics, the Protestant missions dominated the educational scene for the most part of the 19th century. Especially from the 1870s, they were seriously engaged in trying to influence the intellectual, religious and political awakenings of the educated Indians as the most effective method to bring about the eventual conversion of India. Thus, the missionary involvement in education and their efforts to influence the Indian intelligentsia form an integral part of modern Indian history. This role of the missions and an examination of its many underpinnings do not appear to have attracted scholarly research. The present work is an attempt in that direction.

The present study seeks to examine the efforts of the Protestant missions to spread Christian ideas and fath-evangelise - and bring about the conversion of India between 1872 and 1930 especially in the Madras Presidency. In examining these efforts, the main focus of this study is to discern and analyse the major approaches and attitudes adopted by the missions in general and those adopted towards education and the intelligentsia, especially their political outlook, in particular. The missionary efforts to influence education and the intelligentsia appear to be crucially impinging upon their approach to the evangelisation of India during these six decades under study.

In the Protestant missionary efforts to evangelise and bring about the conversion of India during 1872-1930, two clearly demarcated approaches are evident. Evangelisation of India through education and the

intelligentsia was the dominant strategy between 1872 and 1910. Evangelisation of India through the masses was the prominent aspect of the latter period, i.e., between 1910 and 1930. The first phase witnessed a three-pronged approach, namely, (i) evangelic preparation through Christian education; (ii) Christian alternative to religious awakening; and (iii) evangelisation of the political outlook of educated Indians. When this approach to the evangelisation of India did not bear fruit, the approach was changed in favour of evangelisation of the masses during the second phase.

The evangelisation of the masses was taken upon the failure and the consequent rejection of the first approach of evangelisation. This becomes evident from an analysis of (i) the forms in which the rejection and shift were expressed; and (ii) the manner in which it reflected the rejection of the first approach. The failure of the mission to nationalism was the most decisive factor to bring about the shift in favour of the masses, and certain colonial underpinnings which became sharply manifest in respect of the mission to nationalism have also been underscored.

An overview of the educational developments and the relative position of the Protestant missions in the educational system of the Madras Presidency provides the background against which the re-formulation of the missionary approach to education and evangelisation could be viewed. The Protestant missions who hoped to retain their pre-1854 supremacy in the educational system during the post-Education Despatch period, were progressively subordinated to the Government. The missionary complaints and protests against the Government's non-adherence of the policies enunciated in the Education Despatch led to the appointment of the Indian Education Commission in 1882. However, far from reinstating the supremacy of the missionary enterprise the Commission endorsed their relegation. The erosion of the missionary influence in the educational system between 1858 and 1882 in general, and after 1882, in particular, brought about a re-consideration of the object of missionary education. This was also the beginning of a new approach to the evangelisation of India.

The educational missions (i.e., the schools of the missions to impart Western learning and Christian principles to evangelise and convert the Brahmins and high caste Hindus), were widely emulated by all Protestant missions. However, the initial success of the educational missions did not last long. With the decline of missionary influence in education, on the one hand, and the changed outlook of the educated Indians, on the other, the evangelic potential of the educational missions also

steadily dwindled. The continued emphasis on missions despite their depleted evangelic returns led to an acute controversy within Protestant missions and reached a climax in 1872 necessitating a re-statement of the object of the missionary educational activities. The object of the educational missions was changed from evangelism and conversion into diffusion of Christian principles and evangelic preparation. The evangelic preparation accomplished by them was to be followed up by independent evangelic efforts with the educated Indians as a second phase of evangelisation.

The new role of educational missions which became a distinct doctrine of Christian education, gained wider acceptance among Protestant missions from provincial to national levels between 1872 and 1893. The permeation of the Indian society by Christian ideas, values and principles and its gradual acceptance of Christianity, as envisaged during the early 1870s, did not materialise. The popular urge and plea to strengthen the Christian character of the educational missions to curb the irreligious tendency of the secular education was only a partial solution, as it left out the majority of those educated in Government institutions. A more comprehensive solution appeared to be the establishment of a special agency to independently work with the educated Indians. Whether viewed as a complementary to, or as a more comprehensive form of evangelisation than, educational missions, the missions to the educated became a crucial and an urgent issue by the 1880s.

The persistence with educational missions and the anxiety at the religious outlook of the educated Indians reflected the missionary assumption of a crucial link between the intelligentsia and the evangelisation of India. The mission to the educated, also known as independent evangelism, was a prominent feature of the Protestant missionary activities for nearly two and a half decades from the mid-1880s. Since the religious outlook of educated Indians turned contrary to the course envisaged by the missionaries, many of them were dismayed and ruffled at the rise of the multifarious religious tendencies and clamoured for a frontal attack on them. However, another section, the liberal missionary thinkers who discerned a pattern behind the rapidly changing religious outlook of educated Indians between the 1870s and the 1890s, likened it to similar stages experienced by Europe before the acceptance of Christianity. Further, convinced that the impact of Christian principles as the underlying inspiration of India's religious awakening, the leading missionary thinkers advocated an attitude of sympathy and an approach of presenting Christianity not as an exclusive religion but as

one in which all divine truths found in other religions could be seen in their fulness.

However, just when the doctrine of imperfection and fulfilment which characterised independent evangelism was beginning to influence the very concept of purpose and every field of missionary activity, the leading missionary thinkers began to notice the rise of patriotic sentiments behind religious awakening and revivalism. They began to realise that the task of evangelising the religious outlook of educated Indians would not be complete without influencing and evangelising their political outlook. Thus, a mission to the political awakening of educated Indians appeared as urgent by the mid-1890s as the mission to their religious outlook did by the mid-1880s.

Similar to the cleavages of missionary opinion as regards the educational missions and independent evangelism, the mission to the political outlook - nationalism - also witnessed a sharp polarisation of missionary attitude and approach. Further, just as the initial opposition to mission involvement gave way to modified approaches and more active involvement in the cases of educational missions and independent evangelism, the mission to nationalism also gained wider recognition in missionary thinking and activities after a period of sharp division of opinion. Starting from 1885, when the Indian National Congress was formed, up to the mid-1890s, the mission to nationalism was viewed with great expectations as the final phase of evangelisation of Indian intelligentsia. However, the emergence of the militant trends in nationalism from the second half of the 1890s and particularly from 1900, seemed to run counter to the course of evangelisation envisaged by missionaries. Overcoming the initial dismay, the liberal missionaries were still hopeful of slaving nationalism and restoring it on to the moderate and constitutional lines.

When the nationalist movement showed a progressive shift from moderation to militancy, the missionary optimism of evangelising nationalism also declined. The disappointment with the intelligentsia, particularly their political outlook, sparked off sharp reactions from missionaries betraying many dimensions of the link between colonialism and Christian missions. At the same time, it also witnessed equally sharp revulsions among Protestant missionaries against the doctrine of evangelisation of India through education and the intelligentsia and brought about a decisive shift in the object and direction of missionary activities.

The focus of Protestant missionary activities, after 1910, turned to other directions, reversing the importance attached to education and the educated, in favour of evangelisation of the masses. A renewal of evangelic spirit among the Home Churches at the beginning of this century and the disenchantment with the intelligentsia in India combined to bring about the rejection of the approach in favour of the intelligentsia and a shift in favour of the masses.

Harnessing the unity and cooperation achieved through the organization of the mission forces at national and provincial levels for the purpose of evangelising the masses, as witnessed between 1910 and 1923, symbolised one aspect of the rejection of the intelligentsia in favour of the masses. The other aspect manifested in various forms including hostility to the intelligentsia, attack on the nationalist movement, defence of the British rule, and insistence of the Indian Christians and non-British missionaries' loyalty to the British rule.

The shift from intelligentsia to the masses had deep doctrinal ideological underpinnings and inherited many contradictions. Some of these, like nationalism among Indian Christians, manifesting in their demand for Home Rule within the Church, the support it received from non-British missionaries, etc., combined to force, from 1923, a temporary halt to the mass evangelisation, transfer the leadership of the Christian task to Indian Christians and bring about a new outlook of projecting Christianity as a non-exclusive religion. Just as the social relevance of Christian message and the Christian-like spirit of their activities appeared to characterise the outlook of the missions in the second half of the 1920s, there was a resurgence of evangelistic spirit around 1930. Consequently, every Christian activity was required to comprehend and reflect the evangelistic spirit as its mainstay. The manner in which the branch of Christian higher education was brought to be the instrument of Indian Church exemplified the reassertion of evangelism. The transfer of the leadership from foreign missions to the Indian Christians initiated after 1923 received a further confirmation in 1930. This brought to an end the era of evangelisation conceived and prosecuted by foreign missions and heralded the era when the question of evangelisation became the task of the Indian Church and the Indian Christians and the execution of which was no longer counterposed, as missionaries did, to Indian religious and political aspirations.

The chapter titles of the thesis are as follows:

(i) Introduction

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- (ii) Protestant Missions and Educational Developments in Madras Presidency : An Overview
- (iii) From Conversion to Evangelic Preparation : Changing Perspectives of Christian Higher Education, 1872-1893
- (iv) Missions and the Educated, 1880s-1910 : A Christian Alternative to Their Religious Awakening
- (v) Missions and Indian Nationalism, 1885-1910 : Evangelisation of the Political Attitudes of Educated Indians
- (vi) Protestant Missions in India, 1910-1930: Reversal of Priorities.
- (vii) Conclusion.

Bibliography.

Aspects of Dualism in India's Urban Labour Market

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Sup: Prof. A. Vaidyanathan

The concept of a dualistic structure in the urban labour market is a common feature of much of the recent writing on the subject. This is variously described in terms of an 'organised-unorganised', 'formal-informal' or 'primary-secondary' sector dichotomy: Wages are relatively higher, employment is regular in the organised segment. On the other hand, wages are low, contractual relationships are of a shorter duration, turn-over is high and self-employment is common in the unorganised segment. In the context of developing economies, the unorganised segment has commonly been viewed as a buffer in absorbing job seekers who are unable to secure employment in the organised segment of the urban labour market. Our study attempts to investigate various aspects of this dualistic structure in urban India on the basis of all the existing sources of secondary information. The material assembled provides a basis for (a) getting an idea of the size of the unorganised sector and the variations therein over time and space; (b) examining whether the unorganised sector does indeed perform the functions of a buffer; (c) examining whether there is any 'dualism' in the labour market within the organised sector itself; and (d) investigating the extent to which the age-sex characteristics of workers in the unorganised sector differ from those of the organised sector and the factors responsible for it.

At an All-India level, the unorganised sector absorbed as much as half the urban workforce in 1971, according to the most satisfactory of our estimates. Variations were significant across the major States in the country as well, ranging from 58 per cent in Jammu and Kashmir to around 40 per cent of the urban work force in Maharashtra in 1971. These estimates provided the basis to test, both cross-sectionally and over time, the notion implicit in the Bauer-Yamey-Mazumdar view of the urban labour market, that the unorganised sector bears the brunt of adjustment to an excess labour situation, given its role as a buffer. If

what they are saying is correct, one would expect the relative size of the unorganised sector to be positively associated with the rate of unemployment (which is a measure of excess labour supply). This view of the urban labour market does not quite fit the reality either at a point or over time.

The unorganised sector showed an unexpected negative though statistically non-significant relationship with the rate of unemployment. In other words, the cross-sectional association indicates that higher the pressure of excess labour supply, lower is the relative size of the unorganised sector, which is not quite in line with expectation. One reason for this seems to be that the urban labour market is far from homogenous in as much as there are marked and systematic differences of structure as between different size classes of towns. The available evidence suggested that the relative size of the unorganised sector is significantly higher in the smaller towns, whereas the incidence of unemployment is systematically higher in the metropolises and smaller cities. These patterns suggested the importance of the internal composition of the urban areas, in terms of size classes of towns, as an important factor behind the negative relationship. More importantly, they also suggest that we cannot really understand the urban labour market independently of its differentiation in terms of cities and towns. This aspect of the urban labour market was given due attention in our study.

Our study of the nature and direction of changes over time in the relative importance of the unorganised sector was of necessity restricted to the narrow period of a decade, 1961-71. Moreover, problems of comparability of data restricted the study of changes to male workers only. While the rate of unemployment markedly increased in the urban labour market, the share of the unorganised segment in the workforce actually fell over the period. This was the case not only at an All-India level, but also in virtually all the States in the country. Evidently, the unorganised sector does not quite function as a buffer in absorbing excess labour supply.

At a sectorally dis-aggregated level, this decline appeared to be a fairly general phenomenon across the major sectors of economic activity in urban India. It was most striking in manufacturing and services and comparatively less in trade and transportation. In manufacturing, there was a sharp decline, in both absolute and relative terms, of unorganised sector employment in the traditional industries, notably food products, beverages, tobacco and its products, textiles,

leather and leather products. In these industries, the relative importance of both household and non-household segments have declined. The decline in services was observed to be largely on account of a decline in domestic services.

The task of explaining these changes is evidently complex because of the dearth of necessary information. Only in the case of manufacturing activities was it possible to track the more important factors behind the decline in the unorganised sector, particularly the household industry segment. Our estimates indicated that the decline in unorganised household manufacturing activities was much sharper in the smaller towns of the country. The experience of the Artison town further highlighted the sharper extent of decline of household industry in the smaller towns. Drawing heavily on a few studies already done on the traditional industries, notably cotton textiles, the role of various factors such as Government policy, structure of demand were highlighted in in order to explain the decline of handloom weaving industry which is largely conducted on a household basis in the smaller towns and rural areas of the country. These factors are possibly also relevant in explaining the decline of household industry in other traditional industries as well.

Evidence of dualism within the organised sector is to be found in the fact that a part of the workers employed in it are hired on a temporary or casual basis. The proportion of regular workers employed on a permanent basis is as high as 90 per cent in some centres and some industries. The percentage of non-permanent workers (who are variously described as temporary, badli, casual, contract workers) in the total workforce varies a great deal across industries, across enterprises of different size, and across regions. Industry specific factors appear to be important. The relevance of the nature and organisation of production, seasonality, intermittent needs of various industries as important factors behind the permanent-non-permanent worker mix were highlighted in this connection. Moreover, the permanent-non-permanent worker mix systematically varied across different size classes of establishments in a particular industry, the percentage of non-permanent workers being invariably higher in the smaller sized establishments. This seems to suggest that smaller enterprises, though formally subject to various laws, are able to circumvent them more effectively and to a larger degree than units. As for variations across different regions, the case of the cotton textile industry which we examined at length, appeared to corroborate Mazumdar's hypothesis regarding the permanent versus temporary status of migrants in determining the mix of permanent and non-permanent workers.

Another aspect of dualism investigated in our study is sex and age selectivity in the urban labour market. The observation that relatively more females and the young and old workers comprise the unorganised than the organised segment of the labour market is fairly widespread in the literature, although the explanations for the phenomenon are quite varied. In India too, females were found to be disproportionately represented in the unorganised segment not only at an All-India level, but also various States and in most branches of economic activity. Interestingly the extent of selectivity was not significantly, associated with the extent of 'over crowding' of female workers in particular branches of economic activity. This is an important finding that goes beyond the existing literature which emphasizes 'over-crowding' of female workers in a few occupations or industries as a basis for segmentation of female workers in the urban labour market. On the other hand, the extent of sex-selectivity was found to be positively associated with overall female worker to population ratios not only across various States but also size class of towns. This association was observed to be true largely in the case of non-manufacturing activities only. This again is an important finding in our study.

Empirical investigation of age selectivity was possible only the status distribution of the work force. The expectation in the literature is that the self employed workers would be disproportionately biased towards extremes of youth and age. Evidence for the disproportionate representation of young and old workers among the self employed (including helpers) relative to the wage employees, particularly the regular wage and salaried employees was of a mixed nature. It systematically showed the self employed to be only a much older than the wage employees. This was observed not only at an All-India level but also in most States of the country. This evidence suggests that age selectivity possibly reflects a life-cycle phenomenon, according to which the move into self employment occurs only at a much later phase in the working life-time of job seekers in the urban labour market. This again constitutes an important contribution of our study in so far as it goes beyond the existing explanations of selectivity in the literature.

Caste and the Agrarian Structure : A study of Chingleput District

T.K. Sundari

Sup : Prof. A. Vaidyanathan

Motivated by the cursory observations of a field worker in a rural development project in Chingleput district of Tamilnadu, this research study seeks to explore the role played by caste in the rural economy of Chingleput. The specific hypotheses whose validity is sought to be tested are as follows :

- (a) Caste mediates in work arrangements between landowners and wage workers and tenants.
- (b) Bargaining strength of wage labourers/poor tenants varies between villages with roughly similar supply-demand variables such as land-man ratio, concentration of land, productivity, availability of alternative employment etc., *if there are variations in the caste composition of landowners and of wage workers in these villages.*
- (c) Between villages with similar caste-class configurations (caste composition of land owners and wage workers), the bargaining strength of wage workers and poor tenants varies if there are considerable variations in their physical-economic (supply-demand) characteristics.
- (d) The present variations in the caste-class configurations and hence in the role of caste across villages are related to the past caste-class and physical-economic configurations of the villages concerned.

For testing the hypotheses stated above, the author conducted a special survey of several villages in the Chingleput Taluk of Chingleput

district, and also collected historical material including original settlement registers and land records of the villages chosen for the field survey, from the archives. The field survey was conducted in two stages-the first, an in depth study of five villages selected from extreme ends of the caste-class spectrum and economic spectrum based on a typology of caste-class and economic classification of villages. In the next stage, a random sample of thirty villages was chosen, to test for the generality of results observed in the five villages as well as to relate the variations in caste-land labour relation interlinkages to the caste, class and economic characteristics of the villages concerned. The historical study aimed at obtaining insights into the evolution of the interlinkages between caste and land-labour relations and further, to understand why they are so varied in the present day even within a relatively compact and homogenous agro-climatic region.

The typological scheme developed for choosing the sample villages as well as for analysing the results of the survey takes into consideration the caste, class and physical economic characteristics of a village explicitly. It is also such that it makes possible comparison of villages varying only in caste-class configurations, their physical and economic characteristics remaining controlled, and vice-versa.

After a brief review of literature and an outline of the basic premises of the research study in the first chapter, the hypotheses being tested and the methodology adopted for the study is presented in the second chapter.

In the third chapter, the author gives a detailed historical account of the changes in the rural economy and in the role of caste in Chingleput district in the past one century. This provides the backdrop for the findings of the field survey regarding the ways in which caste mediates in work arrangements between land owners and wage workers and tenants, and the discussion of specific contexts in which caste sometimes plays a unifying role among wage workers and at other times a divisive one, presented in the fourth and fifth chapters respectively. Chapter six deals with the changes in the caste composition of land owners and wage workers in the past century and in the physical economic variables, in the villages chosen for the field survey. It also traces the evolution of caste-class configurations of the villages examined. The final chapter summarises the findings of the study and highlights the questions thrown up by it.

The present study shows beyond doubt that caste continues to influence the rural economy to a considerable extent. Caste-conscious-

ness and caste identity are at many times found to be behind *economic* decisions taken by land-owners and workers. Caste enters almost all arrangements of work made between landowners, tenants and wage labourers. Thus the landowner's choice of tenant and fixation of rents is based on caste considerations ; certain work arrangements such as petty tenancies and attached labour are caste specific and are always between upper caste large landowners and Paraiyan labourers; the casual labour market itself is divided along caste lines with the supply of labour for each caste being restricted to labourers of castes on par or lower down in the hierarchy one outcome of which is intra-village variations in wages paid by upper caste landowners and scheduled caste landowners.

One of the most important dimensions of the role of caste in land-labour relations is the way in which it affects the bargaining strength of workers vis-a-vis landowners. The bargaining strength of workers in a village is crucially influenced by its caste-class configuration. Villages of caste-class congruence spell out a position of strength for workers. Where wage labourers are divided across caste lines, the tilt in the balance of forces of landowners vis-a-vis wage labourers is definitely in favour of the former ; however, even in villages where all wage labourers are of the same caste, caste ceases to play a 'unifying' role among workers if the caste to which the wage labourers belong is itself economically differentiated. The above observations pertain to villages with varying caste-class configurations but similar physical and economic characteristics. When we look into villages of the same caste-class configuration but varying land-man ratio, concentration of land, availability of alternative employment and so on, we find that the extent to which caste factor would influence work arrangements is modified by the physical-economic characteristics of villages. For example, though all villages where labourers are divided along caste lines and landowners are not—have a higher proportion of attached labourers than other villages, a village in this configuration with a high degree of alternative employment available *does not have* the same extent of attachment when compared with another where few alternative sources of employment exist.

The present caste class configurations of villages have themselves evolved from specific initial social and economic configurations. The macro-level changes have influenced the individual villages differentially; villages with a particular caste-composition of landowners and labourers and with specific physical-economic characteristics have followed a particular trajectory of change and led to the different caste-class con-

figurations currently observed. There has thus been a dynamic interaction between caste, class and physical-economic characteristics of villages over time, and caste has had an influence in shaping the course of change of villages.

The most significant finding that emerges in this respect is the fact that in a time period where nearly all cultivable waste has been brought under cultivation and several legislative measures sought to help scheduled castes acquire land, *acquisition of land has followed the caste hierarchy; in villages where the upper-labouring castes were present in the population it is they who moved up the land-owning hierarchy and the scheduled castes got only the residual benefits.* This finding helps us understand better the causes behind the extreme hostility that exists today between the upper labouring castes and the scheduled castes : with land becoming scarce, increasing demographic pressure and limited opportunities for employment outside agriculture, poorer members of upper labouring castes find possibilities for upward mobility dwindling ; the disparity *within* the upper labouring castes and scheduled castes, with the workers in the former castes pinning down their downward mobility to the relative improvement of the scheduled castes.

The present study has helped us to some extent in understanding and answering the questions we started with, regarding the role of caste in the rural economy. Being region specific, it is limited in its scope for generalisations. Nevertheless, it raises some important issues regarding the framework required for study of the Indian agrarian structure—either at a time point or over time.

The role played by caste in the transition of village economies and the influence of caste on the work arrangements and wage levels in Chingleput raises important questions regarding the *adequacy of a purely economic framework* for studying *work-arrangements and wage determination*. It seems essential to integrate the social and economic characteristics when studying agrarian relations in India since both influence each other and are inextricably intertwined. Of course, the significance of the caste factor may vary across regions and in some, may be of little importance. But the extent of its significance in some regions suggests that it is better to adopt an integrated framework than make the mistake of ignoring an important set of variables.

This is true not only for a single time-point study but also for studies—especially micro-level, of the changes in the rural economy. We have seen from our study in Chingleput that individual villages are

influenced by larger changes within the boundaries defined not only by their physical-economic characteristics, but also those defined by their initial caste-class configurations.

Our option to study a random-sample of reasonably large number of villages has revealed the tremendous inter-village variations in social and economic characteristics that could exist within the boundaries of a single taluk; this reiterates the need for caution in interpreting findings of studies of a small number of villages and also argues for the benefits in combining in-depth studies of a few villages with a study of a larger random sample.

The decision to study the evolution of the role of caste in the rural economy over a period of hundred years has helped us understand that this role has by no means been static—and that though it was and continues to be a significant factor, its functions have changed a lot. One needs to take cognisance of it as an institution that has lent itself to changes through centuries and would in all probability, continue to do so.

When we turn to issues concerning the organisation of agricultural wage labour, the findings of our study imply that it is imperative to take into consideration the role of caste. We have seen that the *bargaining strength of wage-labourers in a village depended crucially on the caste-composition* of wage-labourers and of landowners. This throws some light on the possible reasons why organisation of wage labourers fail in some areas and succeed in others. It would aid organisation of agricultural wage labourers to be able to identify villages belonging to configurations where wage labourers have a strong bargaining position or otherwise, as we have attempted to do in this study.

However ideal it may be to be able to organise wage labourers along 'class' lines alone irrespective of caste barriers, all evidences from this study show that this is no easy task. The problems underlying are not purely social but economic as well. We have seen from our historical study that the class of "wage labourers" includes within it three main categories (i) landless in the past and present (ii) landless in the past and marginally landed at present (iii) landed in the past and marginally landed/landless at present. Very often, the scheduled castes belong to the first two categories and the upper labouring castes to the third. These economic differences reinforce the caste distinctions leading to a situation where the different caste groups among wage labourers have different interests—and forge alliances with different groups in the class-caste hierarchy.

More than ever before, the increasing tension in the countryside and the frequent eruption of inter-caste violence makes compelling the need to come to grips with the functions and implications of caste divisions in rural economy. The present study is a modest attempt to contribute to furthering our understanding of caste by adopting an integrated framework that takes into account the caste-class and material-economic characteristics. The typological framework that we have developed needs to be tested through application to varying social, economic and agro-climatic backdrops. It could probably thus be widened in scope to be applicable in a more general context.

There are also many further questions that this study starts us off on—for example, “how different would be the caste dynamics in a region with agrarian social and economic conditions drastically different from Chingleput?” “Are there specific social-economic configurations where organisation of agricultural wage labourers across castes is possible?” and so on. Only through several regional studies of areas with varying social, economic and historical backgrounds would it be possible to answer such questions and have a consolidated view of the ramifications of caste divisions for the organisation of agricultural wage labourers.

The Evolution of Sugar Policy in India, 1932-1982: The Political Economy of State Intervention

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The sugar mill industry in India is one of the earliest manufacturing industries in India. While sugarcane cultivation and its processing into indigeneous forms of sugar were known to India for several centuries the manufacture of white crystal sugar is of recent origin. The earliest vacuum-pan sugar manufacturing plants were commissioned as late as the first quarter of the 20th century. The growth of the modern sugar mill industry in India can, however, be traced to the grant of tariff protection in 1932. Today the sugar mill industry, along with cotton and jute textiles, is one of the largest agro-based industries in the country.

Apart from its importance in terms of size and geographical spread across the country the sugar mill industry is also distinguished by other interesting characteristics. It was one of the early avenues for capital accumulation for Indian business enterprise and constituted an important arena of 'primitive capital accumulation' for Indian business enterprise. A large part of the surplus generated here fuelled investment in a wide range of areas in the post-War, and post-Independence period. Another interesting aspect of the industry is that in the post-Independence period it once again offered an important avenue for the emergence of a new class of rural entrepreneurs, the landlord and rich peasant classes, who utilised the institution of the cooperative sugar mills to accumulate capital and branch out of agricultural activity.

In other words, within the span of less than half a century, between 1932 and 1982, the sugar mill industry witnessed the emergence and consolidation of two major entrepreneurial classes in India, namely, a business class with merchant capital origins and another with agrarian origins. The first based in the tropical region and the second in the sub-tropical region. The historical, spatial and social

variations in this process offer a rich source material for research. The economic history of the entrepreneurial groups involved, the role of state intervention, the nature and source of technical change and market control, the inter-relationship between cane, sugar, *gur* and *khandsari* sectors, and so on, are all the various facets which offer immense scope for analytical and empirical analysis.

It is with this perspective that we pursued the study of sugar policy in India. By 'sugar policy' we refer to the policy of the government with respect to the sugar mill industry encompassing various aspects ranging from tariff protection to licensing and pricing policies. We have deliberately chosen to use this phrase in the title of our thesis in order to suggest that the growth of the sugar mill industry is closely linked to the course of state policy both in pre and post-Independence India.

The first chapter of the thesis is devoted to a discussion, more in the form of a self-clarificatory discourse, on the nature of 'state intervention' in a capitalist economy. We consider, albeit briefly, the case of a metropolitan capitalist, colonial and a post-colonial economy and examine the relationship between state and industrialisation in the alternative cases. Our discussion is based on a critical reading of important literature in the area and must be viewed as essentially an introduction to our more detailed analysis of state intervention in the growth of a specific industry. We have argued in this chapter that the relationship between state and industry is not a unique one and is capable of acquiring a wide variety of forms in the history of capitalist development both spatially and temporally.

The main body of the thesis spans Chapters II to IX. In chapters II and III we examine the history of the sugar mill industry in India and the specific problems it faced after tariff protection was granted in the form of raw material supply and quality, pricing, competition within the industry (the specific problems of rapid growth in a constricted home market) and so on. Our analysis of the operation of the Indian Sugar Syndicate and the relationship between growers and millers in this period must be seen as providing the background for our discussion of market control and pricing in the post-Independence period. These two chapters are based on material gathered from the Walchand Hirachand Papers at the Nehru Memorial Museum and Library and on existing literature on the economic history of this period.

Chapter IV examines structural changes within the sugar mill

industry, in particular locational and ownership changes, and presents an extended discussion of the origin, composition and structure of control of the cooperative sugar mills. The three important results of the nature of structural change in the post-Independence period within this industry have been: the locational shift of the industry from the tropical to the sub-tropical region, the shift in the locus of control from the private sector to the cooperative sector, and the growth of low cost mills operating along with high cost mills protected from competition by the operation of price controls.

Chapter V extends the latter part of the discussion in Chapter IV and examines the implications of structural change and inter-firm competition in an environment of government operated controls for technical change. We discuss the scope of economies of scale in the sugar mill industry noting the existence of *potential* scale economies even when they are not *actually* exploited. The barrier to potential economies being translated into actual economies, we argue, is defined by what we have called the 'Duration Gap' problem. The 'Duration Gap', which comprises of a 'distance' and a 'waiting' gap specifies the lag between cane harvesting and crushing, imposes a barrier to mill and plant size. This is not a uniquely defined gap and varies from mill to mill due to a variety of reasons. We critically evaluate the relevance of the standard concepts of scale economies to the specific context of an agro-based manufacturing industry like sugar.

Chapter V concludes with a discussion of the nature of entry barriers in sugar and the role of diversification in defining the structure of market control. Chapter VI proceeds to examine the complex interrelationship between industrial structure, market control and the changing nature of oligopolistic control in the context of the changes within the industry. We draw attention to the role of controls in the sugar market suggesting that the outcome is the operation of a state-sponsored cartel which is crucial to the maintenance of stability within the industry. In this sense we view controls, of one form or another, as inevitable in the existing structure and given the various objectives of state policy.

Chapters VII and VIII analyse sugarcane and sugar price policy and the analysis here further strengthens our argument relating to the crucial role of regulations and controls on pricing and distribution of sugar in maintaining stability within an industry characterised by a variety of internal contradictions. In the case of cane, price controls have been partial and have undergone important changes while in the

case of sugar, price controls have been more pervasive though the distribution regimes have varied over time. Our analysis in these chapters is aimed at focussing on the inter-regional, inter-sectoral and inter-class variations in the process of price formation and the logic of price controls, specially in the case of sugar. Here we see the role of the cooperative sector as a crucial variable in explaining trends in cane price movements; and, of the resistance of urban consumers, on the one hand, and of sugar millers, on the other, in defining the nature of sugar price movements.

Cane and Sugar price policies have to meet a wide range of requirements which are often in conflict with each other. The degree of manoeuvrability available to government is however restricted by the pressures and counter-pressures generated both within the mill sector and by raw material producers and consumers of the final product. Any analysis of such a complex phenomena is necessarily partial since one cannot take account of such a variety of factors in analysing price formation over such a long period. We have only focussed on important elements within this complex structure.

An important consequence of the price policy pursued in cane and sugar has been to provide an incentive for an escalation in cane acreage and output and in sugar output. However such an expansion in output has not been matched by an adequate expansion in demand constrained as it is by the extent price regime and the lower bounds imposed on prices by the existing structure of cane and sugar production. The consequent downward rigidity of prices results in occasional crises of over-production. Such crises are then resolved through a variety of price and non-price adjustments. Chapter IX is devoted to an examination of this phenomenon. In the existing literature on the subject of price-output interaction in cane and sugar the standard explanation for instability has been to view it as the product of a 'cobweb' adjustment process. We have argued that the standard cobweb explanation cannot suffice and what may be more useful in explaining price-output interaction in these markets is a *modified* cobweb explanation. The modification is necessitated by the fact that cane and sugar prices are not freely adjusting prices but are in fact constrained by the existing systems of price regulation. Has our explanation would be relevant to a market in which we encounter *fix-flex* prices so that even if the *fix* prices are incapable of adjusting adequately stability is restored through changes in *flex* prices. However it is not price signals alone which intervene to restore market equilibrium but also non-price signals play an important role.

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Our analysis focusses on the limits to state intervention in an India-type economy, best exemplified by the sugar economy in India, and points to the inherent instability of such system. While it is possible to maintain stability and ensure a steady rate of growth the burden of such adjustment would have to fall on the state and so its success is circumscribed by the extent to which the state can in fact intervene effectively within the system.

In sum, ours is an attempt to examine the nature of 'structural' change in an industry, its historical roots and economic content, in the context of extensive state intervention con trained, however, by the contending, often contradictory, interests that impinge on state policy.

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"A University stands for Humanism, for tolerance, for reason, for the adventure of ideas and for the search of truth. It stands for the onward march of the human race towards ever higher objectives. If the Universities discharge their duties adequately, then it is well with the Nation and the People".

Jawahar Lal Nehru